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Information Series 21

GROUND-WATER RESOURCES OF AUTAUGA COUNTY, ALABAMA

A Reconnaissance Report

By John C. Scott

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Prepared by the
United States Geological Survey
in cooperation with the
Geological Survey of Alabama



University, Alabama
1960







GEOLOGICAL SURVEY OF ALABAMA WALTER B. JONES, STATE GEOLOGIST Information Series 21

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University, Alabama 1960

LETTER OF TRANSMITTAL

University, Alabama

November 7 1960

Honorable John M. Patterson

Governor of Alabama

Montgomery, Alabama

Sir:

I have the honor to transmit herewith the manuscript of a report entitled "Ground-Water Resources of Autauga County, Alabama, A Reconnaissance Report" by John C. Scott, with the request that it be printed as Information Series 21 of the Geological Survey of Alabama.

Respectfully,

WALTER B. JONES

State Geologist



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GROUND-WATER RESOURCES OF AUTAUGA COUNTY, ALABAMA

A Reconnaissance	Report
By John C. So	eott

ABSTRACT

Autauga County is in south-central Alabama and is bounded by Elmore, Montgomery, Lowndes, Dallas, and Chilton Counties. It has an area of 599 square miles and, in 1950, had a population of 18, 186. The county is primarily rural, the only incorporated towns being Prattville, Autaugaville, and Billingsley.

The county is in the northern part of the Coastal Plain province and is divided physiographically into the Central Pine Belt and the flood plain of the Alabama River. The terrain is hilly, ranging in altitude from about 100 feet above sea level in the basin of the Alabama River in the south to almost 700 feet in the north.

The county is underlain by sedimentary deposits of Late Cretaceous age, which rest on a basement complex of pre-Cretaceous metamorphic and igneous rocks. The Late Cretaceous deposits consist of the Coker and the Gordo formations of the Tuscaloosa group, the Eutaw formation, and the Mooreville chalk of the Selma group. Terrace and alluvial deposits of Quaternary age overlie the Cretaceous rocks in and adjacent to the flood plains of the Alabama River and larger tributaries.

The chief sources of ground water are aquifers in the Coker, Gordo, and Eutaw formations. Water for domestic and stock use also is obtained from the terrace and alluvial deposits. Large quantities of ground water are used in the southern part of the county, where flowing wells are common, but only small quantities are used in other parts. Yields of 300 gpm (gallons per minute) or more can be obtained from wells in the Coker and Gordo formations. Sands in the Gordo and Eutaw formations tapped by a well near Autaugaville, based on a 24-hour pumping test, have a coefficient of transmissibility of about 18,000 gpd (gallons per day) per foot.

Ground water in Autauga County is generally soft and contains a relatively small amount of fluoride and sulfate. In some parts of the

county the water contains an objectionable amount of iron but is otherwise suitable for most uses. Water in the Eutaw formation in the extreme southwest corner of the county contains as much as 592 ppm (parts per million) chloride.

INTRODUCTION

Autauga County is in south-central Alabama and has an area of 599 square miles. It is bounded on the east by Elmore and Montgomery Counties, on the south by Lowndes County, on the west by Dallas County, and on the north by Chilton County (fig. 1). The county is primarily rural, the only incorporated towns being Prattville (the county seat), Billingsley, and Autaugaville. The population of the county is 18,186, according to the 1950 census, the eastern and southern parts of the county being the most thickly populated. The economy is mainly agricultural.

Prattville, known as the "Fountain City" because of the many flowing wells in the area, is the center of industry in the county. Industries in the Prattville area manufacture cottongins and parts, cloth, clothing, lumber, and poultry and pork products. One of the oldest cotton-gin factories in the United States has been in operation in the county for more than 100 years. Prattville is only a few miles from Montgomery and is becoming a residential and commercial suburb of that city.

Purpose and Scope of Investigation

The demand for ground water in Alabama has greatly increased during the past 20 years, and, in order to meet this increased demand, information on the occurrence, availability, movement, and chemical quality of ground water must be obtained. The U.S. Geological Survey, in cooperation with the Geological Survey of Alabama, is making reconnaissance ground-water investigations in counties where funds for more detailed studies are not available. These studies are designed to obtain, in a relatively short period of time, general information on ground water and its relation to the geology of an area. This report is the result of one of these investigations.

The ground-water investigation of Autauga County was begun in July 1958 and included the following:

1. An inventory of most drilled wells and selected dug wells and springs was made to determine their distribution and location, depth,

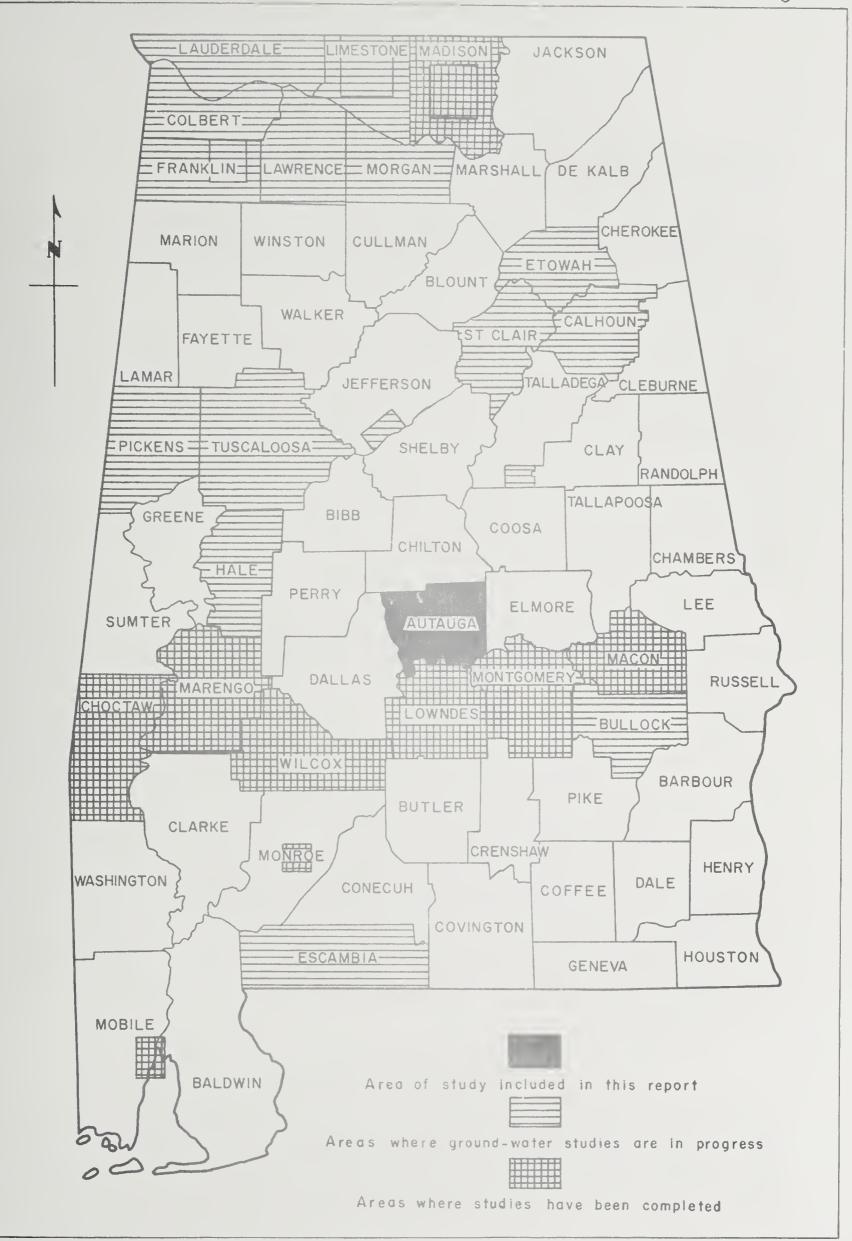


Figure 1.-Map of Alabama showing area studied and areas of other ground-water studies.

construction, yield, water level or artesian pressure, use, and the aquifer tapped by each.

Information was compiled for 337 wells and springs--7 of which tap the Coker formation, 229 the Gordo formation, 91 the Eutaw formation, 4 the terrace or alluvial deposits, and 6 tap more than one of these formations (table 1 and pl. 1).

- 2. Water levels were measured in wells, where possible, and maps of the piezometric surface of water in the Gordo and Eutaw formations were compiled (figs. 6 and 7). Water-level measurements were made in well R-18, which taps the Gordo formation, to determine seasonal fluctuations and water-level trends (fig. 5).
- 3. The chloride content and hardness of water samples from most wells inventoried were determined by field methods (table 1). Water samples from 10 selected wells also were collected for more comprehensive chemical analysis (table 2).
- 4. An aquifer test at the site of well P-25, owned by the Alabama State Conservation Department Nursery at Autaugaville, was made to determine the transmissibility coefficient of sands in the Gordo and Eutaw formations (fig. 8).
- 5. Data on water use and natural discharge were collected to estimate withdrawals of ground water and the amounts of water used and wasted by continuous discharge from flowing wells.
- 6. A geologic reconnaissance map was made to determine the distribution and character of geologic formations cropping out in the county (pl. 2). Two geologic sections were constructed to show the depth, thickness, and structure of the formations in the subsurface (pls. 3-4).

The work was under the direct supervision of W. J. Powell, district geologist of the Ground Water Branch of the Federal Survey in charge of ground-water investigations in Alabama.

Previous Investigations

Information on ground water in Autauga County was first published in 1907 in Geological Survey of Alabama Monograph 6, "The Underground Water Resources of Alabama," by E. A. Smith. Smith recorded depths, drillers' logs, construction, flows, and other information for 51 wells in the county.

Additional ground-water data were published in 1944 in "Ground-Water Resources of the Cretaceous Area of Alabama," by C. W. Carlston. The report includes information for 43 wells and a short summary of the geology and occurrence of ground water in the county. Some of the wells visited by Smith and Carlston were revisited during this study, and the information is included herein.

Publications describing the geology of Autauga County include Geological Survey of Alabama Special Report 14, "Geology of Alabama," by G. I. Adams, Charles Butts, L. W. Stephenson, and Wythe Cooke (1926); and Geological Survey of Alabama Bulletin 48, "Notes on Deposits of Selma and Ripley Age in Alabama," by Watson H. Monroe (1941). The reconnaissance geologic map in the present report (pl. 2) was prepared by the author and John G. Newton and was partly modified from an unpublished geologic map prepared by Louis C. Conant and D. H. Eargle.

A selected bibliography is appended to this report listing reports, maps, and charts that contain information on the geology and groundwater resources of Autauga County.

Well-Numbering System

The numbering of wells in Autauga County is based on the Federal land classification system. In this system each township, consisting of approximately 36 square miles in area, is divided into 36 sections numbered consecutively from 1 in the northeast corner to 36 in the southeast corner. Similarly, Autauga County is divided into townships, each assigned a letter in the same order that sections are numbered. Therefore, the letter A is assigned to the northeast township and the adjoining townships are designated alphabetically through W in the southwest township (fig. 2). The wells within a township are numbered consecutively, as are sections in a township; for example, in township A they are designated A-1, A-2, A-3, etc., and in township R, R-1, R-2, R-3, etc. (pl. 1).

Acknowledgments

The writer is grateful to the residents of Autauga County for supplying information on wells, use of water, and other data needed for the evaluation of the ground-water resources of the county. Special thanks are given to the Acme and Jet Drilling Cos., Montgomery, Ala.; Alex Stoudenmire Well and Supply Co., Prattville, Ala.; B. H. Clark, Au-

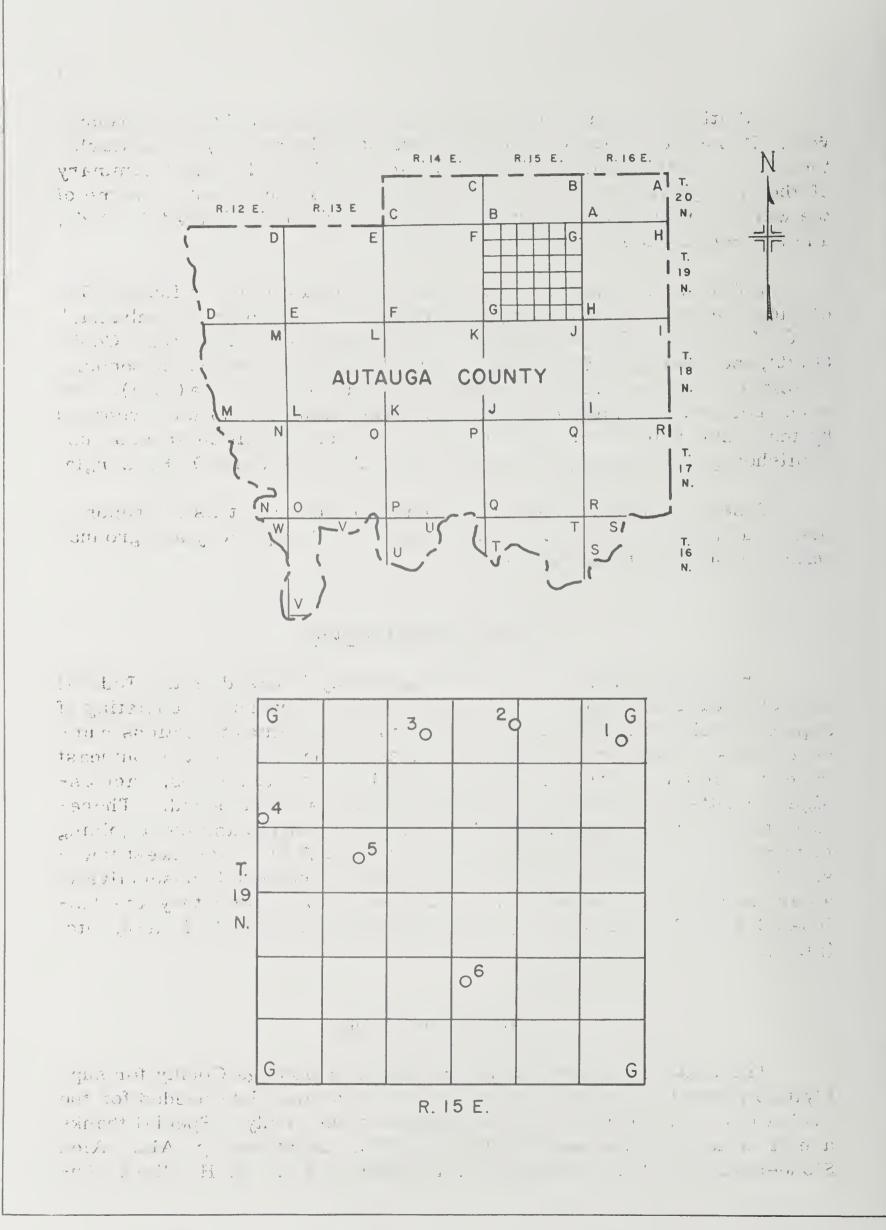


Figure 2.-Diagram showing well-numbering system used in Autauga County, Ala.

taugaville, Ala.; Brady Drilling Co., Selma, Ala.; and Layne-Central Co., Pensacola, Fla., for supplying drillers' logs and other information on wells and for their cooperation in collecting drill cuttings and obtaining electric logs of wells in the county.

Acknowledgment is made to Louis C. Conant for making available his field map, notes, and other data on the surface geology of northern Autauga County.

PHYSICAL FEATURES

Topography

Autauga County is in the northern part of the Coastal Plain physiographic province, and most of the county is in the area known as the Central Pine Belt of Alabama. The name "Fall Line Hills," in reference to the rugged hilly terrain and steep-faced canyons, also is used to describe this topography, which is developed on sand and clay beds in the Coker, Gordo, and Eutaw formations.

The northern part of the county is an area of moderate relief and ranges in altitude from 500 to 700 feet above sea level. Most streams originate in this part of the county and drain southward to the Alabama River. The terrain in the central and southern parts of the county is rugged, consisting of southward-trending ridges, which are as much as 300 feet above adjacent stream valleys. The central part of the county, the outcrop area for the lower part of the Eutaw formation, is especially rugged. Erosion in this area has formed canyons or gullies that have nearly vertical walls as much as 70 feet high.

The hilly terrain in the southern part of the county merges abruptly into the low terrace of the Alabama River. This terrace extends about 6 miles north of the present channel of the river in the vicinity of Forester and ranges in altitude from about 150 to 200 feet above mean sea level. Remnants of an older terrace of the river form high flat plains in the vicinities of Wadsworth, Mulberry, and Pine Level (pl. 2) and range in altitude from about 300 to 400 feet above sea level. Small remnants of this terrace also are found in other parts of the county.

Drainage

Autauga County is drained primarily southward to the Alabama River by Mulberry, Buck, Little Mulberry, Ivy, Beaver, Howard, Swift, Bear, Noland, Autauga, and Bridge Creeks and their tributaries. Mortar Creek drains the northeast corner of the county and discharges into the Coosa River just above its confluence with the Tallapoosa River in Elmore County. The Alabama River, which forms the southern boundary of Autauga County, flows southwestward and joins the Tombigbee River to form the Mobile River, which discharges into the Gulf of Mexico at Mobile. Most parts of the county are well drained except for a few swamp and marshland areas in the flood plain of the Alabama River.

GEOLOGIC FORMATIONS AND THEIR WATER-BEARING PROPERTIES

Geologic formations exposed in Autauga County range in age from Late Cretaceous to Recent (pl. 2). They consist of sand, gravel, sandstone, clay, and chalk. These sedimentary rocks are underlain by crystalline rocks of undetermined age, which consist of schist, gneiss, and other metamorphic and igneous rocks.

The surface of the crystalline-rock complex is erosional and slopes south-southwestward. Formations of Late Cretaceous age strike west-northwestward, and dip gently south-southwestward. The Quaternary terrace deposits are alluvial in origin; they are nearly horizontal but have a slight dip toward their source, the Alabama River.

Pre-Cretaceous Rocks

Crystalline rocks of pre-Cretaceous age crop out a few miles north of Autauga County in Chilton County and underlie all of Autauga County at depths ranging from about 200 feet near the northern boundary of the county to about 1,500 feet in the southwest corner. These rocks, which are predominantly metamorphic, consist of schist, gneiss, quartzite, marble, and granite, and they form the basement complex on which beds of Cretaceous age were deposited. The erosional surface of the crystalline rocks slopes south-southwestward at 45 to 55 feet per mile in the subsurface of Autauga County. The rocks are generally dense and impermeable and yield only small quantities of water to wells. They are not a source of ground water in Autauga County.

Cretaceous System

Deposits of Late Cretaceous age cropping out in Autauga County consist, in ascending order, of the Coker and Gordo formations of the Tuscaloosa group, the Eutaw formation, and the Mooreville chalk. They strike west-northwestward and dip south-southwestward at about 30 to 45 feet per mile. Stratigraphic sections showing the thickness, character, and altitude of formations of Cretaceous age in the subsurface of Autauga County are shown on plates 3 and 4.

Tuscaloosa Group

The Tuscaloosa group overlies the eroded surface of pre-Cretaceous crystalline rocks and crops out in the northern and central parts of the county (pl. 2). The group is presently subdivided into two formations, the Coker at the bottom and the Gordo at the top, which have a combined thickness of about 900 feet. They consist of sand, gravel, clay, shale, and calcareous sandstone deposited under deltaic and shallow marine conditions.

Coker formation. -- The Coker formation unconformably overlies the pre-Cretaceous rocks and crops out in the vicinities of Marbury and Billingsley in the northern part of the county. In Autauga County, the Coker consists of three separate lithologic units that have a maximum combined thickness of about 625 feet in the subsurface. The basal unit, consisting of beds of sand, gravel, boulders, and varicolored clay deposited under deltaic-type conditions, ranges in thickness from about 90 feet in the northern part of the county to about 150 feet in the southern part. The more permeable beds of this unit are a source of ground water in the northern and central parts of the county. Wells tapping this unit should yield from 10 to 100 gpm (gallons per minute).

The middle unit consists chiefly of beds of well-sorted sand, fissile clay, and calcareous sandstone of marine origin. It ranges in thickness from a few feet in the northern part of the county to about 400 feet in the southern part. It is a potential source of ground water in Autauga County, especially in the southern part where the sand beds are relatively thick and well sorted. Wells tapping these beds should yield 200 gpm or more.

The upper unit of the Coker formation, consisting of deltaic sand, gravel, and varicolored clay, is about 50 to 75 feet thick. The sand and gravel beds are generally poorly to moderately well sorted, and are a

source of moderate quantities of ground water in the county.

Gordo formation. --The Gordo formation unconformably overlies the Coker formation. The contact between the formations in the outcrop is generally marked by basal sand and gravel beds of the Gordo overlying varicolored sandy clay of the Coker. The Gordo ranges in thickness from about 115 feet in the outcrop to more than 250 feet in the subsurface in the southern part of the county. It consists of beds of sand, gravel, and varicolored clay of deltaic or nonmarine origin. The beds of sand and gravel are the principal source of water supply and yield 200 gpm or more to wells in most parts of Autauga County. Most of the flowing wells in the county tap the Gordo; flows range from less than 1 to about 30 gpm.

Eutaw Formation

The Eutaw formation unconformably overlies the Gordo formation and consists of gray to yellowish-brown glauconitic sand, sandy clay, and calcareous sandstone. It ranges in thickness from a few feet in the northern part of the county to about 400 feet in the southern part. The contact between the Gordo and the Eutaw formation is characterized by a fine- to coarse-grained slightly glauconitic sand of the Eutaw overlying varicolored sandy clay of the Gordo. Because of its considerable thickness and the dip slope of the topography in the area, the Eutaw crops out in most of Autauga County (pl. 2). It is a potential source of ground water in the central and southern parts of the county but has not been extensively developed. Wells yielding 300 gpm or more from sand beds in the Eutaw formation probably could be constructed in the southern part of the county.

Selma Group

Mooreville chalk. --The Mooreville chalk, the lower formation of the Selma group, unconformably overlies the Eutaw formation; it consists of light-gray to yellowish-orange chalk, calcareous silt, and fossiliferous calcareous sandstone and ranges in thickness from a few feet to about 100 feet in Autauga County. The lower part of the formation crops out in outliers or noses in the southern part of Autauga County, and these, for the most part, are capped by Quaternary terrace deposits. The Mooreville is extensively exposed in Lowndes County, immediately south of Autauga, where it forms the northern part of the physiographic division known as the Black Prairie or "Black Belt." The Mooreville

is dense and relatively impermeable and is not a source of ground water in Autauga County.

Quaternary System

Terrace and Alluvial Deposits

Terrace and alluvial deposits of Pleistocene to Recent age are present in and adjacent to the valleys of the Alabama River and the larger creeks. These deposits, consisting of yellowish-orange sand, gravel, silt, and clay, have a maximum thickness of about 50 feet. Remnants of an older terrace of the Alabama River are exposed in the vicinities of Pine Level, Wadsworth, Autaugaville, and Mulberry. The base of this terrace is as much as 350 feet above the present channel of the river. The base of the lowermost terrace is at an altitude of about 120 to 150 feet above sea level, or about 20 to 50 feet above the present river channel. Alluvial deposits of large creeks in the county range in thickness from about 5 to 30 feet. These deposits are most extensive in the valley of Mulberry Creek near the western boundary of the county. The low terrace deposits and the alluvial deposits are not differentiated on the geologic map (pl. 2).

The terrace and alluvial deposits are in most places very permeable, and would yield large quantities of water to wells in areas where they have a sufficient thickness of saturation. They supply water to wells and springs for domestic use in several parts of the county but have not been developed for large-capacity water supplies. Based on yields of wells constructed in similar deposits in Montgomery County (Powell and others, 1957, p. 15-16), yields of 300 gpm or more probably could be obtained from the terrace deposits in the valley of the Alabama River.

Sand and gravel from these deposits are used extensively as road aggregate and in the manufacture of concrete, asphalt, and related products.

GROUND WATER

Source

Ground water is the water that occurs in the earth's zone of saturation. The top of the saturated zone is called the water table, the po-

sition of which is shown by the level at which water stands in nonartesian wells. Ground water is derived from precipitation, and in Alabama the precipitation is principally rain. A part of the precipitation flows into streams and lakes as direct runoff, a part returns to the atmosphere through evaporation and transpiration, and a part seeps downward through the soil and rocks to become ground water.

Water seeping down through the soil first enters a zone of aeration (fig. 3), which lies between the land surface and the zone of saturation. A part of the water entering the zone of aeration is used to satisfy soil-moisture requirements, being held in this zone by molecular forces which counteract the force of gravity, and a part seeps to the water table and into the zone of saturation. All openings in the zone of saturation are filled with water, and it is the water from this zone that is discharged by wells and springs.

Occurrence and Storage

Ground water occupies pores, fractures, and solution openings in the rocks. The size, shape, and distribution of the openings control the storage and movement of ground water, and they vary considerably from place to place because of variations in rock types.

Porosity is the ratio, expressed as a percentage, of open space in a rock to its total volume. The porosity is influenced by the size, shape, and arrangement of constituent particles; by the degree of sorting, compaction, and cementation of the particles; and by the amount of fracturing, solution, and recrystallization of the rock after its formation.

The permeability of a rock is a measure of its capacity to transmit water. Permeability may be expressed as a coefficient that expresses the rate in gallons per day at which water will move through a cross section of a rock 1 foot square, under a hydraulic gradient of 1 to 1 (loss in head of 1 foot for each foot of travel of the water, whatever the direction of movement). Clay generally has a high porosity but a low permeability because its pore spaces, though numerous, are very small. Sand or gravel generally have a lower porosity than clay but a higher permeability because the open spaces are relatively large and interconnected. Permeable rocks through which ground water moves freely enough to supply wells are called aquifers.

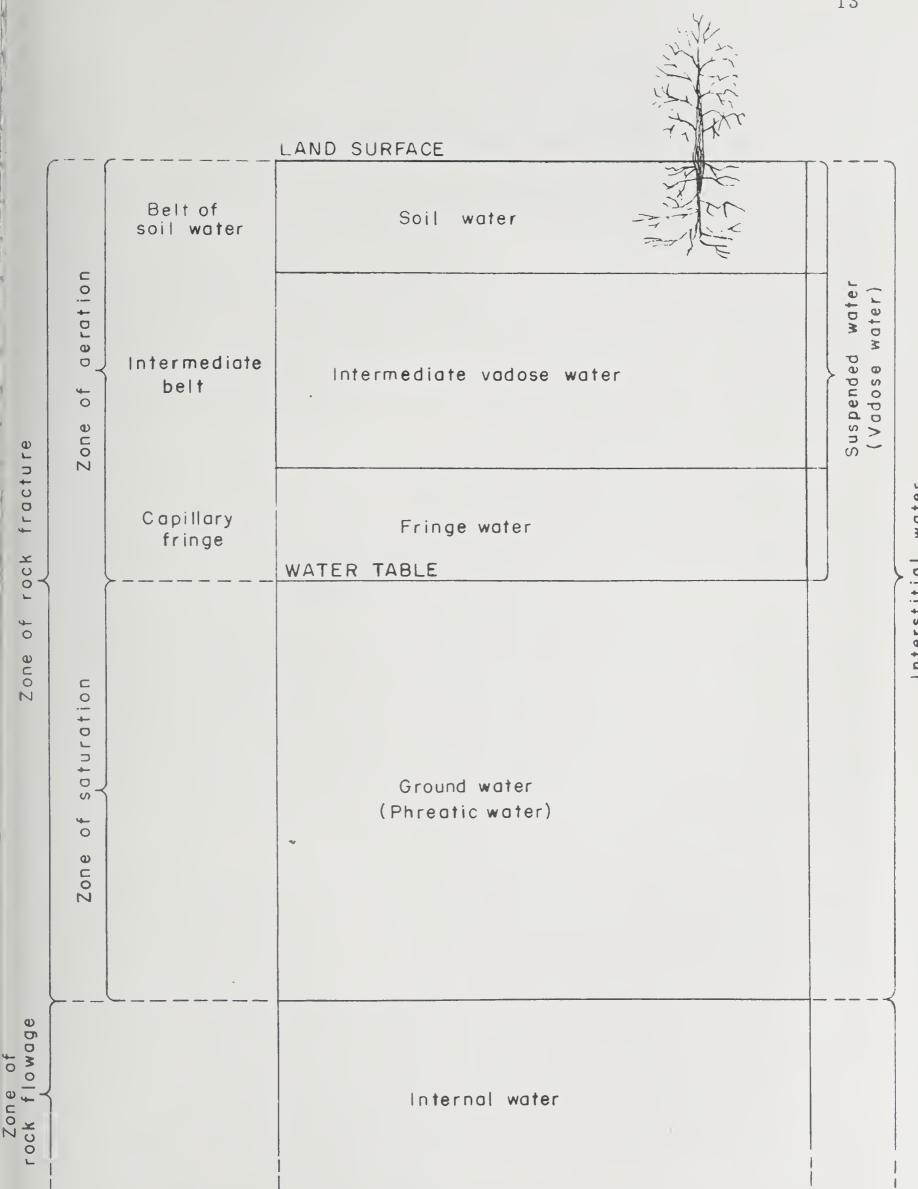


Figure 3.-Diagram showing divisions of subsurface water (After O. E. Meinzer)

Water-Table and Artesian Conditions

The water table is defined as the upper surface of the zone of saturation, except where confined by a bed of clay or other relatively impermeable material.

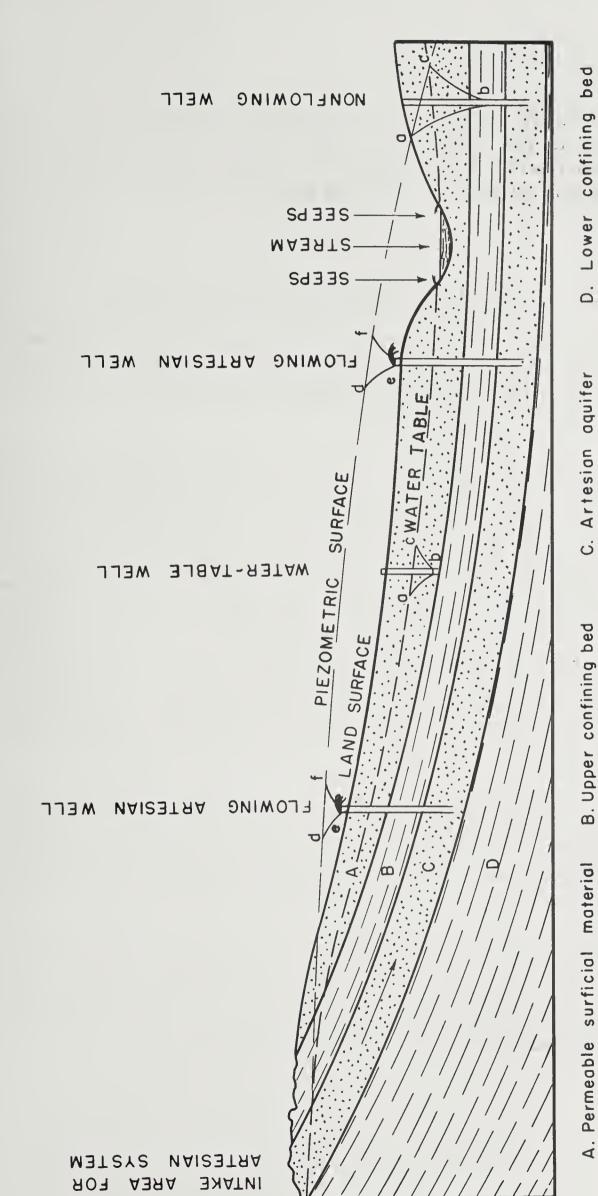
Unconfined water in the zone of saturation moves slowly through the rocks in a direction determined by the slope of the water table. The water table is not a level or stationary surface. Variations in its shape and elevation occur as a result of such factors as the permeability and structure of the rocks, topography, withdrawal of water from wells and springs, and variations in rainfall, which affect the rate of recharge.

The artesian-pressure surface marks the level to which water will rise in a tightly cased well that penetrates a confined or artesian aquifer. Both the water table and the artesian-pressure surface are referred to in this report as the piezometric surface, which was defined by Meinzer (1923b, p. 38) to be the imaginary surface that everywhere coincides with the static level of the water in the aquifer.

An artesian aquifer is generally confined above and below by relatively impermeable beds such as clay or shale (fig. 4). Water derived from rainfall and runoff seeps into the outcrop of the aquifer and percolates downgradient, where it is confined under hydrostatic pressure. This pressure is the result of the weight of the water in the aquifer and the weight of the overlying beds. Water in a well penetrating the confining layer will rise to a height equal to the hydrostatic head at that point in the aquifer. Such a well is referred to as artesian, whether or not it flows at the land surface.

Ground water is under both water-table and artesian conditions in Autauga County. Water-table conditions prevail in the areas of terrace and alluvial deposits and in the outcrop area of the Coker, Gordo, and Eutaw formations. Sand and gravel beds yield water to many shallow dug and driven wells in these areas.

Artesian conditions prevail in Autauga County downdip from the outcrops of the Gordo, Coker, and Eutaw formations, where water in beds of sand and gravel is confined by relatively impermeable beds of clay. Most of the flowing wells in the county are developed in the Coker and Gordo formations. Wells flow in areas of low elevation, such as the flood plain of the Alabama River and the valleys of the larger tributaries.



water-table or a nonflowing artesian well. abc Cone of depression caused by pumping

def Cone of depression caused by natural discharge from flowing artesian well.

water-table conditions. pup artesian showing diagram Schematic Figure Flowing wells are developed in the Eutaw formation in the vicinities of Prattville in the southeastern part of the county and Statesville in the southwestern part. Flows of wells in Autauga County range from less than 1 to about 30 gpm. The area of artesian flow is shown on plate 1.

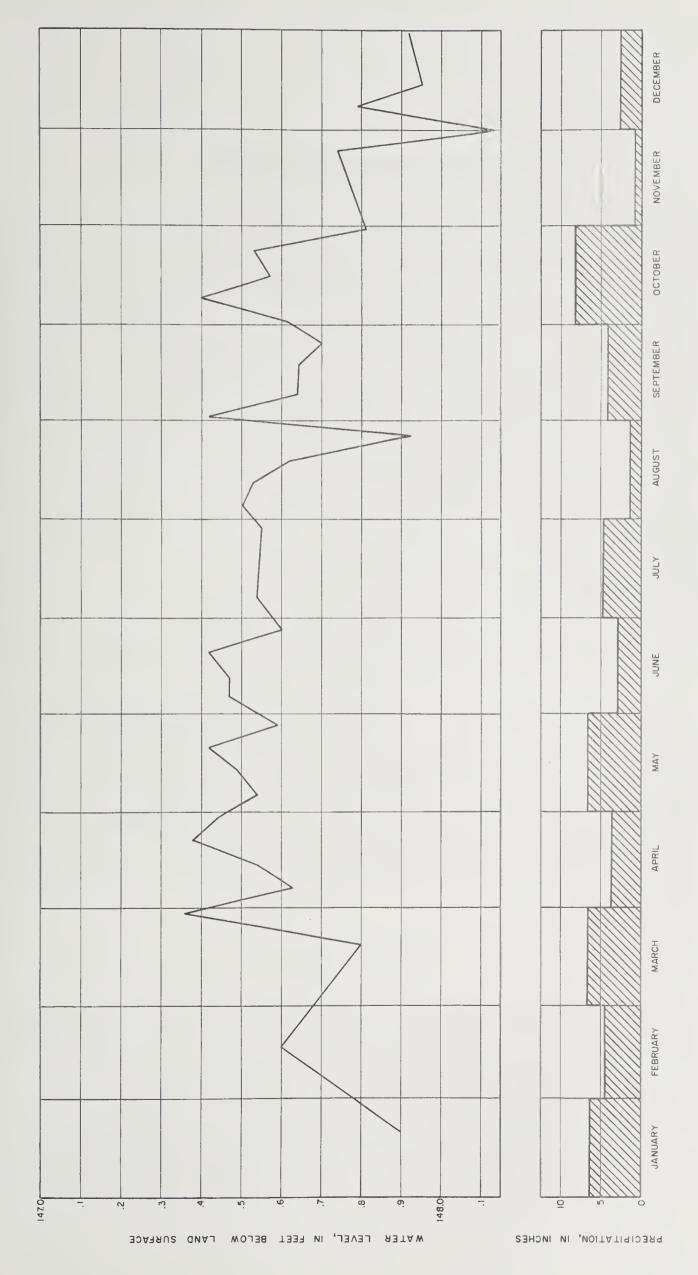
Water-Level Fluctuations and Their Significance

Water-level fluctuations generally can be correlated with recharge or lack of recharge to ground-water reservoirs, withdrawals by pumping, flows from wells and springs, variations in atmospheric pressure, ocean and earth tides, and earthquakes.

Fluctuations of water levels in shallow wells in Autauga County are, for the most part, seasonal or cyclic and are related directly to precipitation. The water levels are highest in early spring because of the continuous and large amount of recharge from the heavy winter rains and the low evaporation rate. Water levels are generally lowest during late autumn or early winter. Normally the water table begins a gradual rise during the latter part of November and continues to rise until late February or March. Water levels decline throughout the summer except for intermittent rises caused by unusually heavy summer rains. Water levels in the shallow aquifers in the county have declined gradually for many years, and many dug wells have been deepened or replaced by deeper drilled wells during the past 10 years in order to obtain sufficient supplies of water.

The effect of precipitation on water levels in artesian wells developed in the Coker, Gordo, and Eutaw formations may lag from days to months. In some wells the water levels cannot be correlated directly with precipitation because the recharge effect is obscured by groundwater withdrawal or natural discharge during the lag period.

Periodic water-level measurements were made in well R-18, reportedly constructed in sand and gravel of the Gordo formation, at the farm of William E. Matthews near Prattville. Fluctuations in water level in this well during 1959 reflect recharge (fig. 5). Pumpage from nearby well R-19 also affects the water level in well R-18.



formation, and monthly precipitation at Prattville, Ala., 1959. Figure 5.- Fluctuation of water level in well R-18 tapping the Gordo

Movement and Discharge

Figures 6 and 7 are piezometric maps of water in the Gordo and Eutaw formations, respectively. They show by contour lines the general water levels in wells tapping these formations and direction of movement The water moves from places where the piezometric of ground water. surface is high toward places where it is low, in the direction of the steepest gradient, which is at right angles to the contours. indicate that the altitude of the water surface is highest in the northern part of the county and that ground water in both formations moves generally southward and locally toward larger creek valleys in some parts of the county. The southward movement is generally parallel to the dip of the beds; the movement toward the creek valleys is caused by the increased hydraulic gradient in the vicinity of the creeks where they are incised into the aquifers, thereby creating effluent seepage from the for-This seepage, common in Autauga County, is mation into the stream. responsible for the continuous flow of some of the creeks during dry periods. The town of Jones, in the western part of the county, is famous for its many springs, which issue from the basal sand beds of the Eutaw formation that have been incised by Mulberry Creek. Clay beds in the underlying Gordo formation prevent the water from seeping downward.

Large quantities of ground water are discharged from aquifers in the county by flowing wells. Flowing wells can be constructed in many parts of the county, but they are concentrated in the vicinities of Prattville, Forester, Autaugaville, Statesville, and Jones. The combined discharge from all flowing wells in the county is estimated to be greater than 1 million gpd (gallons per day). Of this, it is estimated that almost 1 million gallons is wasted. This quantity of water would supply the city of Prattville, whose average daily ground-water use is about a million gallons.

Aquifer Tests

Much information on the behavior of wells and concerning the hydrologic properties of aquifers can be determined from aquifer tests. An aquifer test is made by measuring the rate of drawdown of the water level in a discharging well or in one or more observation wells. The discharge is maintained at a uniform rate for the duration of the test, which may extend for hours or days, depending on the geologic and hydrologic conditions. Ordinarily, the test is continued until the water level in the well is declining at a very slow rate. After the discharge



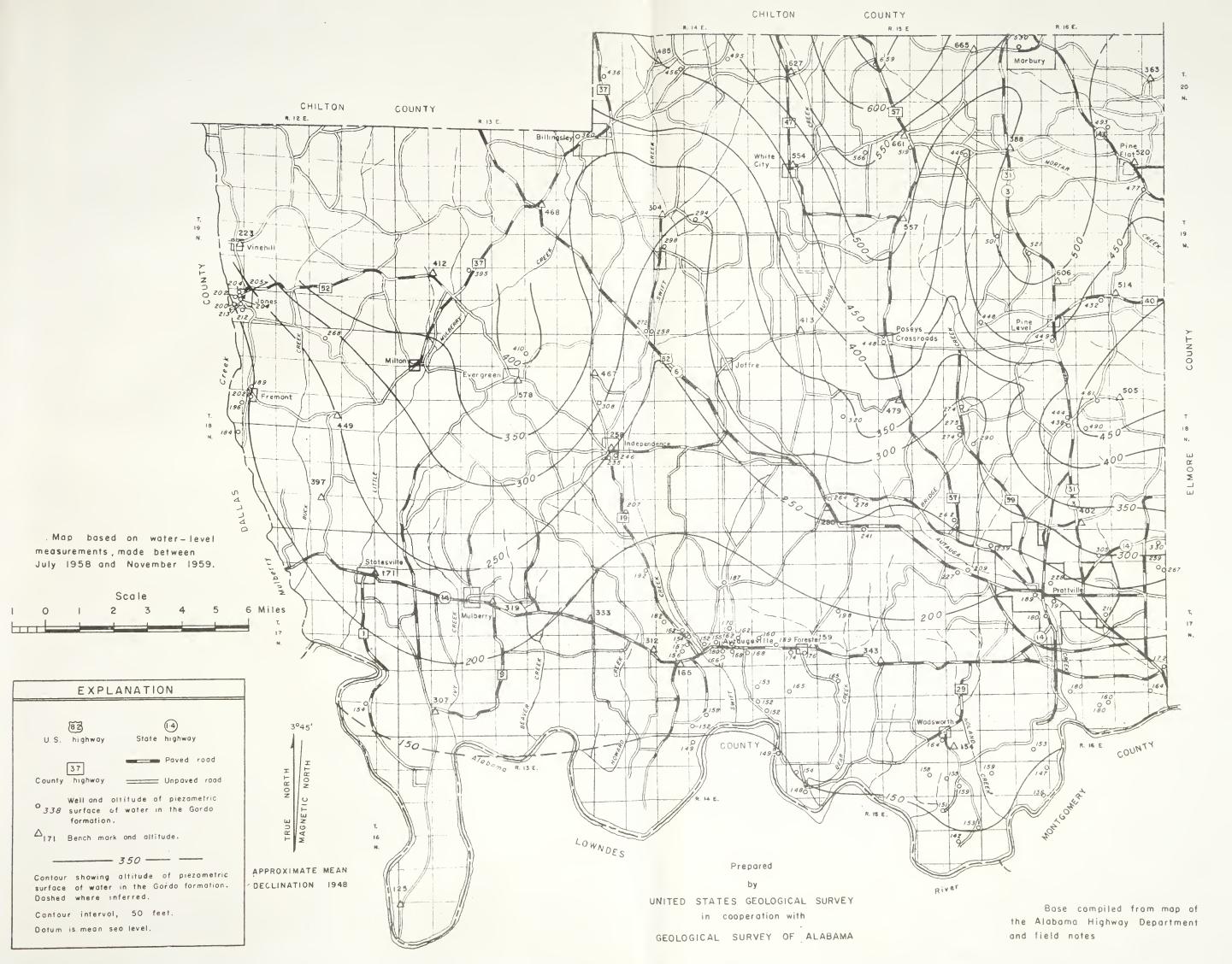
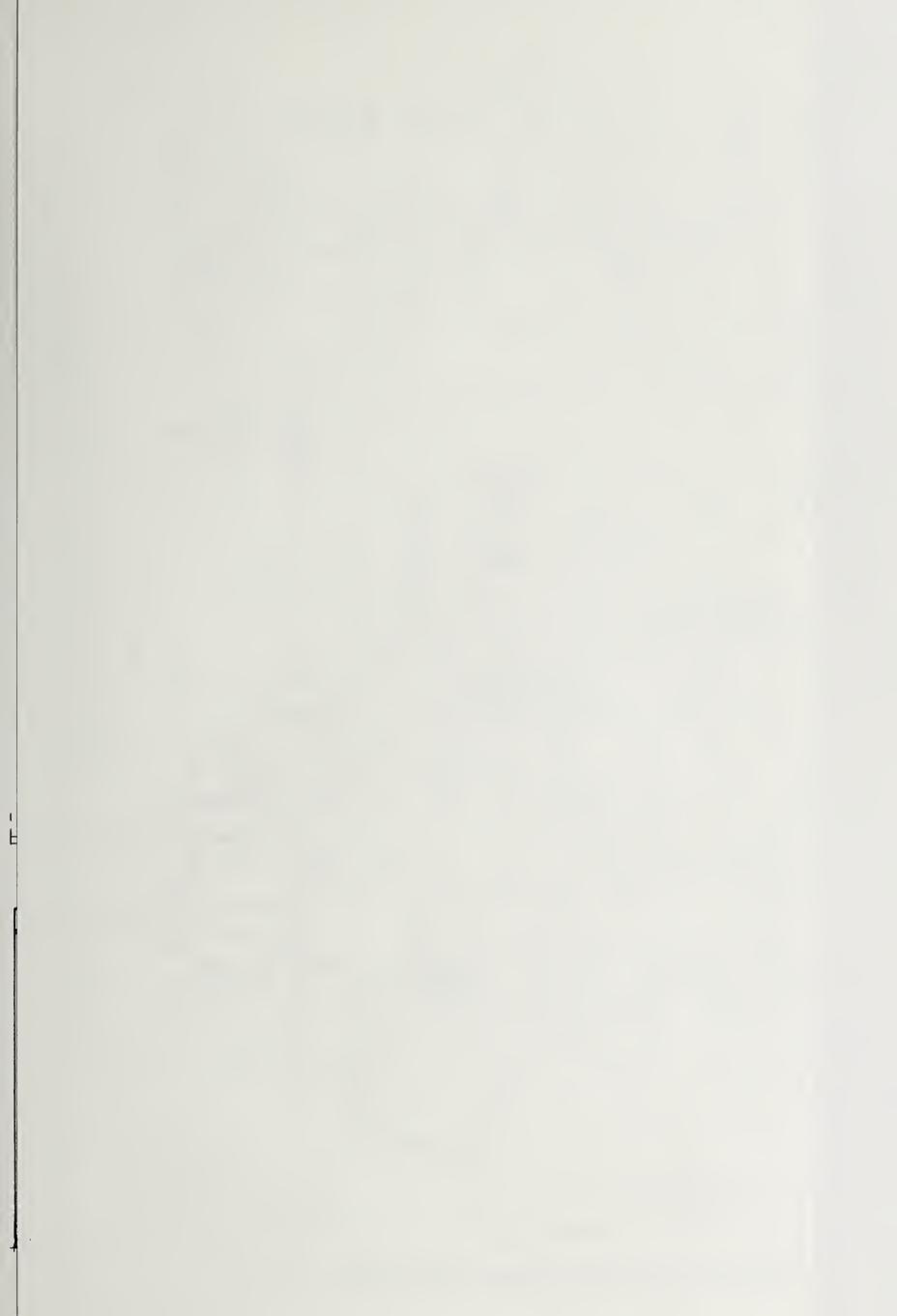


Figure 6.-Map of the piezometric surface of water in the Gordo formation, Autauga County, Ala.



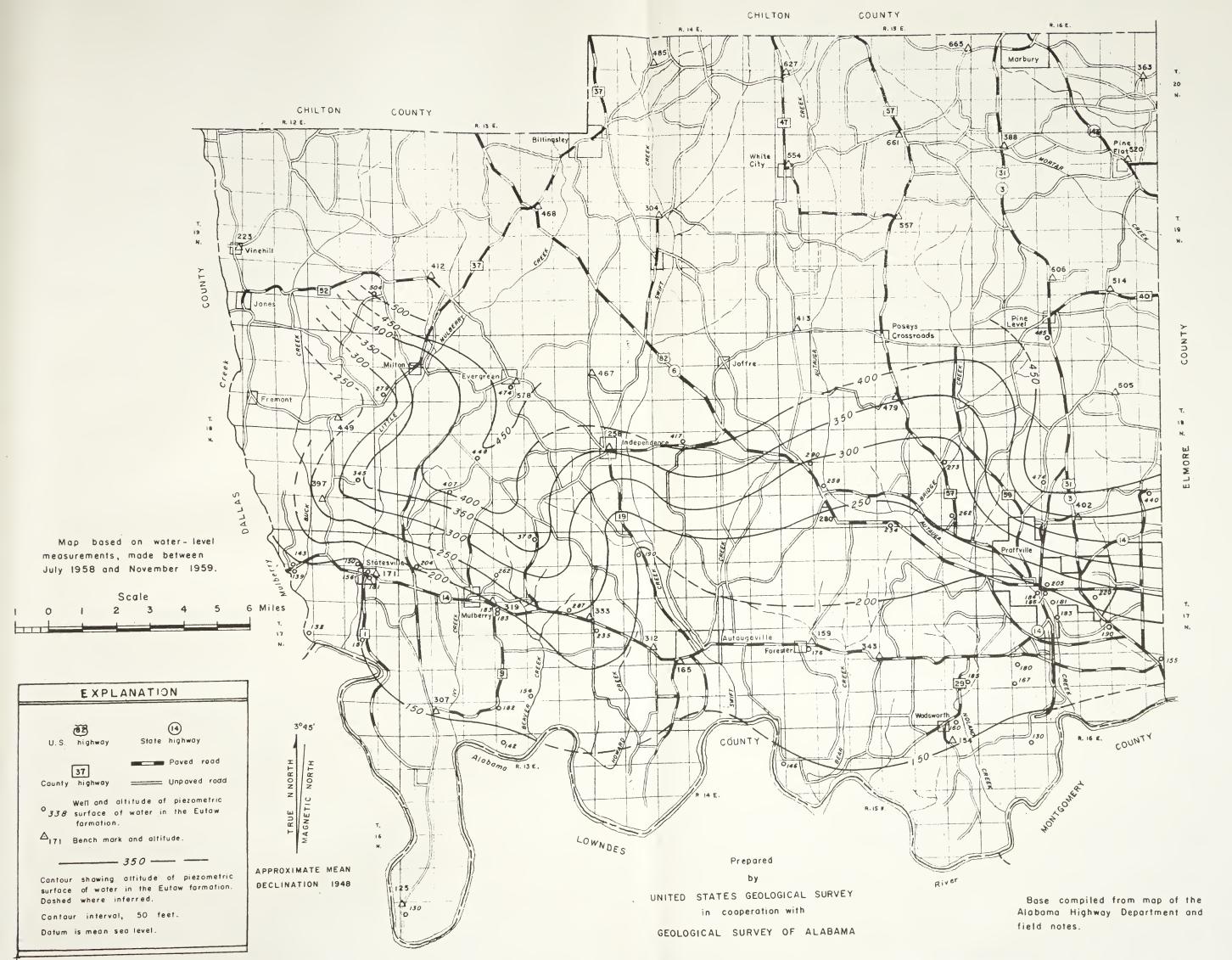


Figure 7.— Map of the piezometric surface of water in the Eutaw formation, Autauga County, Ala.

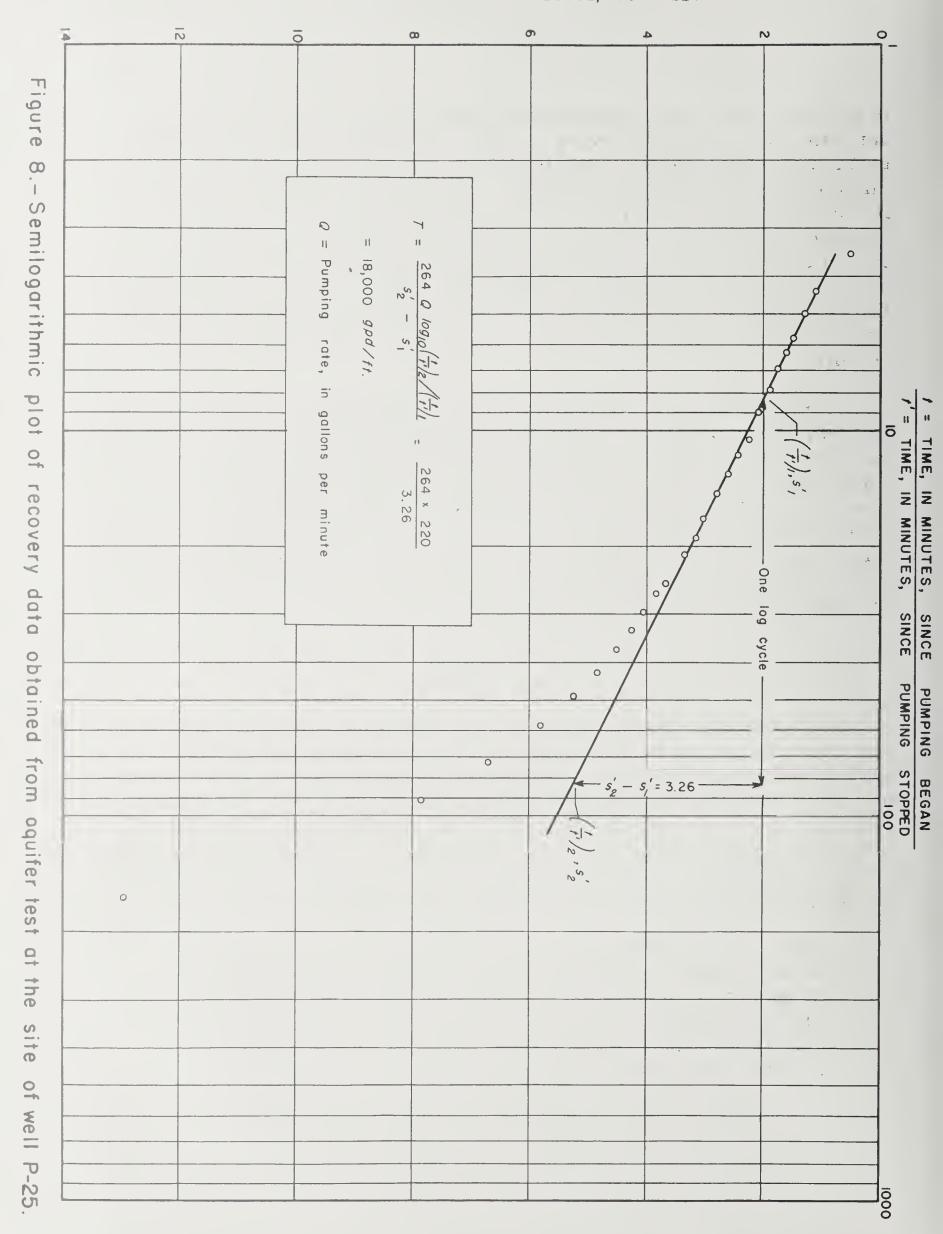
is stopped, water-level measurements are made in a similar manner to determine the rate of recovery. Information obtained from an aquifer test includes the specific capacity of the well and the coefficient of transmissibility of the producing aquifer. The specific capacity of a well is its rate of yield per unit measurement of drawdown and is commonly expressed in gallons per minute per foot of drawdown. The coefficient of transmissibility is usually expressed as the amount of water in gallons per day that moves through a strip of the aquifer 1 foot wide extending the full height of the aquifer under unit hydraulic gradient, or through a section of the aquifer 1 mile wide under a hydraulic gradient of 1 foot per mile.

An aquifer test was made on well P-25 at the Autaugaville State Nursery in March 1959. The well, tapping sands in the Gordo and Eutaw formations, was pumped at the rate of 220 gpm for 24 hours. Water levels were measured periodically during the test to determine the drawdown in the pumping well and nearby well P-26. Water levels were measured for 24 hours after the aquifer test to determine the rate of water-level recovery. The results of this test, shown on figure 8, indicate a specific capacity of 2.18 gpm per foot, and a coefficient of transmissibility of 18,000 gpd per foot.

Use of Water

Ground water in the county is used mainly for domestic and stock supplies, but in places it is used also for municipal, industrial, irrigation, and school supplies. The wells of largest capacity in the county are those owned by the city of Prattville (R-38 and R-40), the Autaugaville State Nursery (P-25 and P-26), and the Whittaker farm (R-53). The wells owned by the Autaugaville Nursery and the Whittaker farm are used for irrigation. The estimated maximum ground-water withdrawals for all purposes in 1959, in gallons per day, were as follows:

Domestic and stock	300,000
Rural schools	130,000
Irrigation	600,000
	250,000
Industrial	500,000
Natural flow from wells 1, 0	000,000
Total	280,000



QUALITY OF WATER

Water that falls as rain or snow contains only small quantities of dissolved mineral matter, but upon reaching the ground it begins to dissolve minerals from the soil and rocks. The amount and kind of minerals dissolved in ground water varies greatly from place to place, depending upon such factors as the amount and type of organic material in the soil, the type of rocks through or over which the water moves, the length of time the water is in contact with the soil and rocks, and the temperature of the water. Some rocks contain rather soluble salts, and, as a result, water passing through or over them will become highly mineralized. Other rocks contain relatively insoluble minerals, and the water passing through or over them will dissolve relatively small amounts of mineral matter. Nearly all ground water contains calcium because it is readily dissolved from deposits of limestone, gypsum, dolomite, and other calcareous rocks. Other constituents common in ground water are sodium, potassium, magnesium, iron, manganese, bicarbonate, sulfate, chloride, fluoride, nitrate, and silica.

The chemical character of water may restrict its use for municipal, industrial, domestic, or irrigation supplies. Water-quality tolerances beyond which water is not suitable for a particular purpose are not easily defined; however, water for municipal and domestic supplies should, insofar as possible, conform to the standards recommended by the United States Public Health Service (1946). According to these standards, iron and manganese together should not exceed 0.3 ppm (part per million); magnesium should not exceed 125 ppm; sulfate should not exceed 250 ppm; chloride should not exceed 250 ppm; fluoride must not exceed 1.5 ppm; and dissolved solids preferably should not exceed 500 ppm. If water conforming to these standards is not available, water containing dissolved solids of as much as 1,000 ppm may be used for Fluoride in drinking water in excess of 1.5 ppm may public supply. cause mottled enamel of children's teeth if the water is used during the period of calcification of the teeth--that is, roughly during the first 5 to 8 years of life (Dean and others, 1942). Excessive hardness is an undesirable quality of water for domestic and industrial use, because hard water increases soap consumption and deposits scale in pipes, heating equipment and boilers.

The hardness and chloride content of water from most wells inventoried were determined by field analysis (table 1). The results of more comprehensive chemical analysis of water from 12 selected wells and springs used for industrial, irrigation, school, and domestic supplies in Autauga County and for 2 nearby wells in Montgomery County

are given in table 2.

The analyses indicate that ground water of good quality can be obtained in most sections of the county. The chloride content of water from all aquifers is low except in the extreme southwest corner of the county, where water from the Eutaw formation contains as much as 592 ppm of chloride.

Locally, excessive amounts of iron are present in water in the Gordo and Eutaw formations. The analyses indicate that iron in water from the Gordo formation ranges from 0.01 to 0.32 ppm, and averages about 0.10 ppm; iron in water from the Eutaw formation ranges from 0.04 to 3.4 ppm; the median is about 0.12 ppm. The water sampling was insufficient to determine the iron content of water in the Coker formation and the alluvial and terrace deposits; however, based on well owners' reports of stained porcelain and clothing, the iron content is probably excessive in some areas.

Ground water in Autauga County is generally soft. Water from the Coker formation ranges in hardness from 8 to 94 ppm and averages about 50 ppm; water from the Gordo formation ranges from 2 to 132 ppm, and averages about 25 ppm; and water from the Eutaw formation ranges from 6 to 278 ppm, and averages about 50 ppm.

The fluoride content of water from all aquifers, except locally from the Eutaw, is low, ranging from 0.1 to 2.8 ppm and averaging about 0.3 ppm.

CONCLUSIONS

The results of the reconnaissance of ground water of Autauga County lead to the following conclusions:

1. Autauga County is underlain by sedimentary deposits of sand, gravel, calcareous sandstone, clay, and chalk ranging in age from Late Cretaceous to Recent. The Late Cretaceous deposits consist of the Coker and Gordo formations of the Tuscaloosa group, the Eutaw formation, and the Mooreville chalk of the Selma group. These formations dip south-southwestward at 30 to 45 feet per mile and have a combined thickness of more than 1,500 feet in the southwestern part of the county. Terrace and alluvial deposits of Pleistocene to Recent age are distributed in and adjacent to the flood plain of the Alabama River and its major tributaries. Remnants of river terrace deposits also are present in the

vicinities of Pine Level, Prattmont, Wadsworth, Autaugaville, and Mulberry.

- 2. The principal sources of ground water in the county are drilled or bored wells tapping sand and gravel beds in the Coker, Gordo, and Eutaw formations. These wells range in diameter from 2 to 16 inches and in depth from less than 100 feet to more than 600 feet. Wells tapping these formations flow in lowland areas of the county, and flows of 30 gpm or more can be obtained in some places. Pumped wells in many parts of the county may yield 300 gpm or more. Wells of greatest yields tap the Coker and Gordo formations. Moderate to large quantities of water also can be pumped from wells tapping the Eutaw formation and the terrace and alluvial deposits, where these deposits are saturated and are of sufficient thickness.
- 3. Ground water of good quality is available in almost all parts of the county. In some parts, the water contains objectionable amounts of iron. The highest concentrations of iron are in water from the Eutaw formation. The ground water is generally soft and contains only small amounts of chloride, fluoride, and sulfate.

SELECTED BIBLIOGRAPHY

- Adams, G. I., Butts, Charles, Stephenson, L. W., and Cooke, Wythe, 1926, Geology of Alabama: Alabama Geol. Survey Spec. Rept. 14, 312 p.
- Carlston, C. W., 1942, Fluoride in the ground water of the Cretaceous area of Alabama: Alabama Geol. Survey Bull. 52, 67 p.
- bama: Alabama Geol. Survey Spec. Rept. 18, 203 p.
- Dean, H. T., Arnold, F. A., Elvove, Elias, Johnston, D. C., and Short, E. M., 1942, Domestic water and dental caries: U.S. Public Health Service Repts., v. 57, no. 32, p. 1176-1177.
- Eargle, D. H., 1950, Geologic map of the Selma group in eastern Alabama: U.S. Geol. Survey Oil and Gas Inv. Prelim. Map 105.
- Georgia: U.S. Geol. Survey Bull. 1014, 101 p. [1956].

- Fenneman, N. M., 1938, Physiography of eastern United States: New York and London, McGraw-Hill, 714 p.
- Meinzer, O. E., 1923a, The occurrence of ground water in the United States, with a discussion of principles: U.S. Geol. Survey Water-Supply Paper 489, 321 p.
- U.S. Geol. Survey Water-Supply Paper 494, 71 p.
- Monroe, Watson H., 1941, Notes on deposits of Selma and Ripley age in Alabama: Alabama Geol. Survey Bull. 48, 150 p.
- Powell, W. J., Reade, H. L., and Scott, J. C., 1957, Interim report on the geology and ground-water resources of Montgomery, Ala., and vicinity: Alabama Geol. Survey Inf. Ser. 3, 108 p.
- Smith, E. A., 1907, The underground water resources of Alabama: Alabama Geol. Survey Mon. 6, 388 p.
- U.S. Public Health Service, 1946, Drinking water standards: Public Health Service Repts., v. 61, p. 383-384.

TABLES

Table 1. -- Records of wells and springs in Autauga County, Ala

Well or spring No.: Numbers correspond to those in plate I and table 2; asterisk indicates chemical analysis given in table 2.

Type: Dr. drilled or bored; Dn. driven; Du. dug; S. spring.
Depth of well and water level: Reported depths below land surface are given

In feet; measured depths are given in feet and tenths.

Water-bearing unit: Kck, Coker formation; Kg, Gordo formation; Ke, Eutaw formation; 2t, high terrace deposits; Qal, low terrace and alluvial deposits.

Altitude: Altitudes determined by aneroid barometer.
Method of lift: Cy, cylinder; J, jet; N, none; T, turbine; M, manual;
Cf, centrifugal or shallow-well piston; F, flowing well.
Use of water: D, domestic; N, not used; O, observation; P, public supply; S, stock; Ind, industrial; Irr, irrigation.

		Remarks	Casing: 3-in. from surface to 265 ft.; 1^{\perp}_{4} -in. screen from 265 to 270 ft.	Casing: 4-in. from surface to 270 ft.; 3-in. screen from 270 to 275 ft.	Casing: 4-in. from surface to 180 ft.; none below.	Casing: 4-in. from surface to 94 ft.; 3-in. screen from 94 to 97 ft.	Casing: 4-in. to 180 ft.; 3-in screen from 180 to 185 ft. Yield reported, 50 gpm in 1959.		•	Casing: 3-in. from surface to 215 ft.; $1\frac{1}{4}$ -in. screen from 215 to 220 ft.		Casing: 3-in. from surface to 195 ft.; l_4^{\perp} -in. screen from 195 to 200 ft. Supplies church and 2 homes.	Supplies 400 pupils.	
Cito	ations	Hardness as CaCO ₃ (ppm)	20	30	34	18	∞	:	26	48	64	09	40	
ormain	in in in	Chloride (Cl)	4	4	4	4	1	:	4	4	4	4	4	
Fig. 1 determination	r leid de	Temperature (*F)	:	:	•	:	:	:	69	:	:	:	:	
		Tatsw to asU	D	Д	Q	Q	p,	z.	Q	Q	Q	Q	Ф	
		Method of lift	Cy	Cy	Cy	Cy	E	Cy	Z	Cy	Cy	Cy	E	
- I ove	100	Date of meas- urement				1959		:	:	:	:	:	:	
Water level	אמנכן דכ	Above (+) or below land surface (feet)		:	:	1.9	:	:	:	:	:	:	:	
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		gnireed-rateW tinu	Kck	Kck	Kck (?)	Kg	Kg (?)	Kck	Kg (?)	Kg (?)	Kg (?)	. Kg (?)	Kg (?)	
		Diameter of well (inches)	m	4	4	4	4	4	m	ಣ	ಣ	e	4	
		Depth of well	270	275	320	26	185	465	200	220	200	200	180	
		Lype	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr	
		Druller	Alex Stoudenmire Well & Supply Co.	do	Acme Drilling Co.	Alex Stoudenmire 'Well & Supply Co.	do	Austin Stoudenmire	op	Alex Stoudenmire Well & Supply Co.	Austin Stoudenmire	Alex Stoudenmire Well & Supply Co.		
		Owner	Harry J. Morrison.	Mountain Top Cafe .	Dominican Cloister of Saint Jude.	op	Holy Ghost Mission School.	J. M. Luker Estate.	A. D. Jones	J. S. Culver	George Grant	Marbury Baptist Church.	Marbury High School.	
	.0	Well or spring N	A - 1	A - 2	A - 3	A - 4	*A - 5	A - 6	A- 7	A - 8	A'- 9	A-10	A-11	

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		2	×

																				29
Casing: 3-in. from surface to 175 ft.; $1\frac{1}{4}$ -in. screen from 175 to 178 ft.	Casing: 24-in. concrete tile to 49 ft.; none below.	Casing: 26-in. concrete tile.	Casing: 3-in. from surface to 14i ft.; $1\frac{1}{4}$ -in. screen from 141 to 144 ft.	Casing: 4-in. from surface to 170 ft.; 3-in. screen from 170 to 175 ft.					Casing: 24-in. concrete tile to 20 ft.; none below.	Supplies 2 homes and stock.		Supplies 110 pupils.	Casing: 4-in. from surface to 60 ft.; 2-in. from surface to 165 ft.; none below. Estimated discharge, 15 gpm in 1959. Supplies 2 homes and irrigates garden.	Estimated discharge, 10 gpm in May 1959.	Casing: 4-in. from surface to 20 ft.; 2-in. from surface to 160 ft.; 2-in. screen from 160 to 165 ft. Measured discharge, 1.2 gpm on 5-26-59.	Casing: 4-in. to 60 ft.; 2-in. from surface to 170 ft.; none below. Measured discharge, 8.6 gpm on 5-26-59.	Casing: 4-in. to 40 ft.; 2-in. from surface to 140 ft.; none below. Measured discharge, 10 gpm on 5-22-59.	Measured discharge, 10 gpm on 5-22-59.	Casing: 3-in. to 350 ft. Estimated discharge, 2 gpm on 5-26-59. See driller's log. Supplies 5 homes.	
38	20	22	14	16	22	26	38	64	20	52	88	28	16	20	88	9	14	14	106	
 4	11	4	4	4	4	4	4	25	4	33	1	11	11	11	11	2	11	1	11	
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:	538	671	•	•	•	571	531	499	262	565	517	532	200	202	202	198	201	200	201	
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Dr	Du	Du	Dr	Dr	Dr	Dn	Du	Du	Da	Du	Dn	Da	Dr	Dr	Dr	Dr	Dr	Dr	Dr	
Alex Stoudenmire Well & Supply Co.			Alex Stoudenmire Well & Supply Co.	op	C. W. Dunlap		:				:		R. A. Brady	Radford and Son.	Alex Stoudenmire Well & Supply Co.	Radford and Son .	R. A. Brady	op	· · · · · · op · · · · ·	
Colon Wright	J. E. Varner	Pentecost School	G. O. Kelley	J. A. Hooper	B. B. Pearson	Blinker Estate	J. D. Jones	O. O. Weldon	H. G. Herrod	W. L. Willitte	Bethel Baptist Church.	New Salem School	J. W. Thomas	J. W. McCullough	Payton King	D. M. Parker	H. G. Reed	E. Epperson	Southern Railroad	
A-12	A-13	B- 1	B- 2	B- 3	B- 4	C- 1	C- 2	C- 3	D- 1	D- 2	D- 3	D- 4	D- 5	D- 6	D- 7	*D- 8	D- 9	D-10	D-11	

Casing: 4-in. to 143 ft.; 4-in. screen from 143 to 155 ft. Reported yield, 13 gpm in July 1959. Supplies home and heat-air conditioning system. Casing: 16- and 10-in. to 304 ft.; 10-in. screen from 304 to 364 ft. Reported yield, 400 gpm Casing: 4-in. to 100 ft.; 2-in. from 100 to 380 ft.; none below. Measured discharge, 1.3 gpm on 5-26-59. asing: 3-in. to 40 ft.; 2-in. from surface to 250 ft.; none below. Estimated discharge, 20 Casing: 3-in. to 80 ft.; 2-in. screen from 80 to 90 ft. Supplies 3 homes. ft.; 2-in. screen from Measured discharge, 3.9 gpm on 5-26-59. Measured discharge, 5.5 gpm on 6-16-59. Supplies several homes. Measured discharge, 6.0 gpm on 6-16-59 See sample and electric logs. Ħ. 9 24-in. concrete to 40 ft. Supplies home and chicken farm. 30-in. concrete tile to less than I gpm in June 1959. Supplies home and swimming Remarks to 50 Supplies 350 pupils. 2-in. Casing: 3-in. Casing: 60 ft. Casing: Casing: (mdd) Field determinations CacO₃ 18 12 89 18 98 14 48 22 38 46 11 50 38 42 24 48 94 Hardness as (CI) 4 4 4 \Box 11 23 25 Chloride 5 Temperature (4°) 2 2 67. 66. 89 99 68. 67 29 D, S D, S D, S S Use of water Q Д Ω Ind Q Б А Ω Ω Ω Ω Ď, Method of lift 1 щ Ľ \vdash [4 ц Щ Cf H ٦ ٦ ٦ ٦ ٦ ٦ J ٦ 1 - 555-26-59 6 - 16 - 596-16-59 -59 -59 6-22-59 nrement Date of meas-၀ ф qo ф level -6 -9 - 1 Water surface (feet) 8.3 17.6 5 9 below land 54. 44. 36. က 2 4 39. 118 To (+) SvodA 415 312 320 435 surface (feet) 254 448 909 440 295 270 637 Altitude of land Kck (?) Kck ητun Ke Kg Kg Kg Kg (?) Kg Kg (?) Kg Kg Kg KgKg Kg Kg Kg Water-bearing 10 3/4 (səqəui) 4, 2 3,2 3,2 က 2 4 က 4 4 30 30 24 24 30 16, Diameter of well 61.0 47.6 41.1 2 2 (feet) 364 210 9 22 48. 480 90 73 120 320 200 9 155 Depth of well Du Dr Dr Dn Dr Dr D Dr Dr Dr Dr Du Da Dr Dr Dr Type S Alex Stoudenmire Well & Supply Co. Layne-Central Co. Dunlap. Dunlap. Bentley Clark. Dunlap. Dunlap. Brady Driller Percey Hill ф --Mims. ≥. . Χ. .≪ Α. ပ ပ ပ ပ Nelson.... Burmeister. Percey Hill Transcontinental Gas Pipe Line. Moseley Camp. Billingsley High School. Gillıland Gulliland Sadie Campbell Buckner Clifton Turner Marvin Harris Deason. Spigner Wyatt. Campbell and Thebo Owner Jones School Œ, F 回 G. 回 Ë B. 回 豆 Υ. ` 回 Ö. 5 ĸ. نر 回 H. D-13 D-12 α ಣ 4 2 9 2 က 4 2 9 2 က Well or spring No. <u>-</u> <u>-</u> 占 핕 5 G-넙 딥 占 님 -H * _ 다 님 ഥ G

Casing: 4-in. to 120 ft.; 2-in. screen from 120 to 125 ft.		Casing: 4-in. to 92 ft.; 2-in. screen from 92 to 102 ft.			Casing: 6-in. to 130 ft.; 4-in. screen from 130 to 150 ft.	Casing: 4-m. to 137 ft.		Insufficient supply. Supplements supply for home and chicken farm. See driller's log.	Supplies home and 6,000 chickens.	Casing: 4-in, to 200 ft.; slotted from 150 to 200 ft.	Casing: 3-in. to 126 ft.; 3-in. screen from 126 to 130 ft.	Casing: 3-in. to 175 ft.; $1\frac{1}{4}$ -in. screen from 175 to 185 ft.	Casing: 3-in. to 155 ft.; $1\frac{1}{4}$ -in. screen from 155 to 165 ft.	Casing: 3-in. to 152 ft.; l_4^{\perp} -in. screen from 152 to 155 ft.	Supplies 2 homes.	Casing: 3-in. to 130 ft.; $1\frac{1}{4}$ -in. screen from 130 to 135 ft.	Casing: 4-ın. to 145 ft.	Casing: 3-in. to 200 ft.; $1\frac{1}{4}$ -in. screen from 200 to 203 ft.
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125	200	102	148	160	150	147	52.6	200	265	200	130	185	165	155	147	55	175	203
Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dn	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr
Alex Stoudenmire Well & Supply Co.		Alex Stoudenmire 'Well & Supply Co.	op		Acme Drilling Ca	Alex Stoudenmire Well & Supply Co.		H. W. Peerson	Alex Stoudenmire Well & Supply Co.	Jet Drilling Co	Alex Stoudenmire Well & Supply Co.	op	op	op	James A. Stoud- enmire.	Alex Stoudenmire Well & Supply Co.	op	· · · · · · · · · · · · · · · · · · ·
N. R. Gillespie	L. Huddleston	J. M. Donovan	J. F. Endress	Smith Lumber Co	John J. Scott	R. P. Gibbons	J. O. Garrett	Ruth M. Fleener	op	Н. G. Hлl	J. R. French	W. F. Cranmore	J. M. Phillips	Liberty Baptist Church.	Marvin C. Lee	Thomas D. Post	Percy D. Roy	Leon Boone
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wells and springs

Table I. --Records of

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	asing: 3-in. to 151 ft.; 14-in. screen from 151 to 154 ft.	: 3-in. to 90 ft.; none below.		Casing: 3-in. to 165 ft.; 1¼-in. screen from 165 to 175 ft. Supplies 2 homes and vegetable garden.	es pottery plant and home.	: 4-m. to 200 ft.		: 3-m. to 170 ft.; none below.	Supplies cafe and service station.	: 4- and 3-in. to 186 ft.; lower 20 ft. ed.		: 4-in. to 165 ft.; 3-in. screen from 165	using: 24-in. concrete tile to 60 ft. Supplies 2 homes.		: 30-in, concrete tile to 60 ft.; none w.	: 4-in. to 162 ft.; 3-in. screen from 162 if ft. Supplies nursery and home.	ಞ	33
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480	576	:	:	530	624	618	:	:	:		540		583		530	:	0 0 0	•
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က	ಣ	က	က	က	ಣ	4	ಣ	က	က	4,3	ಣ	4	24	က	30	4	ಣ	ಣ
125	i 54	185	210	175	220	220	200	175	200	186	150	175	62.0	200	63.3	167	112	177
Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Du	Dr	Dū	Dr	Dr	Dr
Alex Sioudenmire Well & Supply Co.	do	:	Alex Stoudenmire Well & Supply Co.	op	op	op	:	Alex Stoudenmire Well & Supply Co.		Jet Drilling Co	Alex Stoudenmire Well & Supply Co.	op	:			James A. Stouden- mire.	Alex Stoudenmire Well & Supply Co.	· · · · · · · · · · · · · · · · · · ·
J. H. Nummy.	H. A. Martin	Alvin Ross	Joe Nummy	Robert H. Chesnutt.	H. M. Boggs	op	R. T. Kirkland	L. C. Mannug	Deavers Truck Stop.	Zeno Stringfellow	County Line Christian Church.	M. L. Livings	Robert Wright	H. H. Adams	M. O. Hunt	Westwood Nursery .	Pleasant Hill Baptist Church.	R. W. Carter
I-10	I-11	I-12	I-13	I-14	[-1 <u>5</u>	91-I	I-17	1-18	I-19	1-20	1-21	I-22	I-23	I-24	1-25	1-26	I-27	I-28

concrete tile to 40 ft.; none below. Casing: 2-in. to 295 ft.; $1\frac{4}{4}$ -in. screen from 295 to 300 ft. Casing: 3-in. to 160 ft.; 3-in. screen from 160 to 165 ft. Supplies nursery, swimming pool, and home. Casing: 4-in. to 139 ft.; 3-in. screen from 139 Supplies home and heat-air conditioning system. Supplies 8,000 to 146 ft. Supplies nursery, swimming pool, Supplies Estimated discharge, 1 gpm on 4-29-59. 3-in. to 120 ft.; none below. Casing: 3-in. to 90 ft.; none below. 2 homes and stock. ın 1959. Remarks Reported yield, 3 gpm chickens and home. Supplies 125 pupils. 24-in. Casing: Casing: (mdd) Field determinations 8 9 9 18 16 4 CaCO3 132 92 110 12 12 ∞ 14 20 Hardness as (CI) 18 11 \Box 18 32 18 11 18 Ξ 11 11 Chloride (F) Temperature 69 99 67 D, S ß Ω Q Q Ω Q Q О Ω Use of water Ω Ω Q Д Q Ö, $C_{\mathbf{y}}$ Cy $C_{\mathbf{y}}$ CyCy Method of lift Ľ $C_{\mathbf{y}}$ $C_{\mathbf{y}}$ \mathbb{Z} ſz, CtЪ Г صر 9-16-58 -59 nrement 4-29-59 Date of measоþ оp မှ Water surface (feet) 47.6 0 2 . 2 below land 69. 80 100 To (+) 9vodA 488 548 275 surface (feet) 554 504 273 Altitude of land arun (?) Kg (?) Ke (?) Ke Kg (?) Kg (?) Kg Kg (?) Kg Kg Kg Ke (?) Kg Kg Kg Water-bearing (inches) S ಣ 3 30 ೧ 4 4 က 4 က က 24 30 ಌ 2 Diameter of well <u>_</u> 74.2 (1991) 300 150 165 125 57 150 146 125 145 187 170 182 42 300 Depth of well Dr Dr Dr Da Dr Dr Dr Dr Dr Dr Dr Dū Du Dr Dr Type Alex Stoudenmire Well & Supply Co. Alex Stoudenmire Alex Stoudenmire Alex Stoudenmire Stoud-Well & Supply Co. Well & Supply Co. Well & Supply Co. Acme Drilling Co. Driller James A. оþ ф op ф enmire. Bridge Creek Lodge Camp Tuckabatchee. JrMount Sinai School Charles 'W. Jones George Blackmon Blackmon Yarbrough JrDonovan, Kingston School A. Thorne Avery, Owner op . . . Ray Earl Moses R. Lee. John S. George ij ij 回 3 3 Ď. Ą. Ś 1-30 2 1 - 291-33 1-34 က 9 6 Well or spring No. 1 - 32 ∞ I-31 J-J., <u>_</u> J. ٦ ٦

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Casing: 3-in. to 120 ft.; none below.			Estimated discharge, less than 1 gpm on 5-1-59.	Casing: 3-in. to 125 ft.; 14-in. screen from 125 to 130 ft.	Supplies 4 homes.		Casing: 3-in. to 55 ft. Supplies 4 homes and trailer park.	Supplies 45 pupils.	Casing: 4-in. to 100 ft.; none below. Reported yield, 10 gpm in 1959. Supplies motel, cafe, and swimming pool.	,	Supplies meat-processing plant.	•	Casing: 4-in. to 86 ft.; 14-in. screen from 86 to 96 ft. Reported yield, 30 gpm in May 1959. Supplies cafe, service station, and meat market.	Supplies service station and home.				Casing: concrete tile and plaster curbing to 140 ft.
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:	34.5	:	∞. +	16	:	31.7	22	26.5	10	:	20	:	14.2	13.5	58.4	:	:	134.5
:	355	:	273	306	:	305	280	316	274	:	298	:	255	248	320	:	:	473
Kg	Kg	Kg	Kg	Kg	Ke (?)	Ke	Ke	Ke	Kg	Kg (?)	Kg	Ke (?)	Kg	Ke (?)	Kg	Kg	Kg	Kg (?)
m	24	က	82	က	:	30	က	30	4	က	က	က	4	က	4	က	က	30, 24
160	40	118	300	130	:	36.0	55	31.1	150	100	190	80	96	77.0	200	165	185	141.0
Dr	Du	Dr	Dr	Dr	Ø	Du	Dr	Du	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Du
Alex Stoudenmire Well & Supply Co.	Mims	Alex Stoudenmire Well & Supply Co.	op	op					Alex Stoudenmire Well & Supply Co.	op	Austin Stouden- mire.	Alex Stoudenmire Well & Supply Co.	op			Alex Stoudenmire Well & Supply Co.	op	Smitherman
Simuel Deramus	Goodson Estate	E. W. Murphree	Otto Jones	G. M. Taylor	Upchurch Estate	J. F. Posey	N. B. Reynolds	Locust Bluff School.	Cınderella Motel	D. B. Faulk	Deramus Packıng Co.	R. E. Miller	J. L. Horton	K. L. McClande	T. W. Glenn	W. T. Carter	op	Hardy Giles
J-10	J-11	J-12	J-13	J-14	J-15	J-16	J-17	J-18	J-19	J-20	J-21	J-22	J-23	J-24	J-25	K- 1	K- 2	K- 3

Casing: 3-in. to 166 ft.; $1\frac{1}{4}$ -in. screen from 166 to 169 ft. Casing: 2-in. to 45 ft.; 2-in. screen from 45 to 48 ft. to 145 ft.; 3-m. screen from 145 screen from 195 Supplies level, 4 ft. above surface on 5-5-59. Measscreen from Measured static water level, 15.0 ft. above surface on 8-14-40; estimated static water ured discharge, 13.9 gpm on 8-14-40; estimated discharge, 10 gpm on 5-5-59. asing: 3-in. to 150 ft.; none below. home and 10,000 chickens. 2-in. to 280 ft.; none below. to 200 ft.; none below Supplies home and 10,000 chickens. to 186 ft.; 1½-in. 2-in. to 195 ft.; 2-in. ft. Supplies 2 homes. Remarks Casing: 3-in. to 180 ft. to 160 Supplies 75 pupils. Ď. 3-in. 3-in. ft. 4-in. 3-1n. Casing: 2-in to 200 ft. Casing: to 189 Casing: to 150 Casing: Casing: Casing: (mdd) 10 8 9 Field determinations CaCO3 14 10 10 ∞ 18 20 14 12 20 Hardness as (CJ) 4 11 11 Ξ 11 11 11 Π Ξ 11 Chloride (T°) 67 Temperature D, S D, S S S D, S ß ß Use of water Z Ω Ω Ω ď Ω Ω Ω Ď, ď Ď, Ď, Ď, Ď, CyCyCyCy $C_{\mathbf{y}}$ Cy C_{y} $C_{\mathbf{y}}$ $C_{\mathbf{y}}$ C_{y} Method of lift Cf Çţ $C_{\mathbf{X}}$ $C_{\mathbf{y}}$ $C_{\mathbf{y}}$ ፲ **-**5-59 -59 -59 -59 -59 nrement Date of measqo qo level 5-5-5-Water below land surface (feet) 9.1 0 73. 24. .4 90 65 90 Above (+) or 440 398 475 surface (feet) 473 255 260 490 203 564 550 Altitude of land Kg Kg (?) $\mathbf{K}^{\mathbf{g}}$ Kg Kg Kg Kg Kg Kg Ke Kg $\mathbf{K}^{\mathbf{g}}$ Kg Kg Ke Kg Kg Water-bearing (səyəur) \sim 2 က 3 3 က က 2 2 30 က 2 က 4 Diameter of well 2 (feet) 77. 220 200 48 180 180 189 169 200 162 290 293 160 200 150 320 197 Depth of well Dr Dr Dr Dr Du Dr Dr Dr Dr Dr Dr Dr Dr Dr Type Dr Dr Dr Alex Stoudenmire Well & Supply Co. Alex Stoudenmire Well & Supply Co. Alex Stoudenmire Well & Supply Co. Bentley Clark. W. Dunlap. Carter. Bentley Clark. Driller op ဝ H. i ن Dan Gissendanner Friendship School Gaddis Realty Co James F. Golson Deramus Rainwater Rainwater JrCarter Carter Wyatt Mable Carter Askın. Perry Oates. Cole, Smith Farm оþ оþ Ö. Σ̈́ \mathbf{Z} i Œ Ξ. Ŧ. Α. \geq Z. \geq \geq ا ٦. 9 8 K-12 L- 1 6 K-10 K-13 K-11 K-14 2 က 2 9 Well or spring No. X 1 $\overset{\mathbf{K}}{\sim}$ Γ- $\overline{\mathbf{A}}$ $\overline{\mathbf{A}}$ 1 -Ä Ą 1 <u>-</u>1

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		Casing: 24-in. concrete tile to 36 ft.	Supplies 2 homes.	Casing: 4-in. to 280 ft.; 3-in. screen from 280 to 285 ft.		Casing: 4-in. to 265 ft.; 3-in. screen from 265 to 275 ft.	Measured discharge, 17.6 gpm on 5-21-59. Supplies home and vegetable garden.	Casing: 2-in. to 305 ft.; 2-in. screen from 305 to 310 ft. Estimated discharge, 20 gpm on 5-21-59.		Measured discharge, 11.4 gpm on 4-24-59. Flows from discharge pipe 2.5 ft. below top of casing.	Measured discharge, 26.7 gpm on 4-24-59.	Estimated discharge, less than 1 gpm on 4-24-59; measured discharge, 19.8 gpm on 7-25-40.	Measured discharge, 1.8 gpm on 4-26-59; measured discharge, 6.5 gpm on 7-25-40.	Measured static water level, 2.5 ft. above surface on 7-25-40; measured discharge, 4.4 gpm on 4-24-59 flowing from pipe 3 ft. below top of casing; measured discharge, 20.2 gpm on 7-25-40.	Casing: 3-in. to 42 ft.; none below. Measured discharge, 26.7 gpm on 4-24-59.	Casing: 3-in. to 40 ft.; none below.			Casing: 4-in. to 142 ft.; 2-in. from 142 to 276 ft.; 2-in. screen from 276 to 300 ft.
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:	21.9	33.0	63.3	21.7	41.3	10	en +	4	25.1	2.0	+ 4	+	+	٠.	+ 2.5	÷.	+ 12	33.3	160
:	470	440	331	211	320	212	193	180	370	152	139	138	156	162	130	151	142	403	364
Kg	Ke	Ke	Kg	Kg	Ke	Kg	Kg	Kg	Ke	Ke	Ke	Ke	Ke	Ke	Ke	Ke	Kg	Ke	Ke
m	30	24	24	4,	20	4	4	62	24	4	4	4	4	4	8	ಣ	3, 2	30	4, 2
270	28.0	37.2	69	285	53.0	275	350	310	31.0	200	180	150	155	155	201	260	700	42.0	300
Dr	Da	Du	Da	Dr	Da	Dr	Dr	Dr	Du	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Da	Dr
Alex Stoudenmire Well & Supply Co.	:		:	Radford and Son .	:	Radford and Son .	op	op		Bentley Clark	:	Cecil Radford	op	op	Alex Stoudenmire Well & Supply Co.	Bentley Clark			R. H. Brady
J. A. Rainwater	*Ninslow School	E. C. Daniels	R. L. Walker	J. T. Smedley	Percy Chandler	H. O. Smedley	T. J. Fulford	J. H. Bruce	D. L. Whetstone	Sam Esco	Rastus McLendon	op	C. W. Johnson	op	C. A. Billingsley	Russell Wood	C. W. Johnson	Peyton Langford	G. E. Treadwell
L- 7	L- 8	L- 9	M- 1	M- 2	M- 3	M- 4	9 - W	M- 6	M - 7	N- 1	*N-2	*N - 3	N- 4	Z Z	9 - N	N - 7	N - 8	0- 1	*0-2

	Remarks	Casing: 4-in. to 100 ft.; none below.	Casing: 4-in. to 125 ft.; none below. Supplies 3 homes and stock.		Casing: 3- and $2\frac{1}{2}$ -in. to 350 ft.	-	Well replaced by O-9.		Casing: 3-in. to 100 ft.; none below.	Do.	Casing: 4-in. to 20 ft.; none below. Abandoned because of highly mineralized water.		Casing: 4-in. to 40 ft.; none below. See sample and electric logs.		Measured discharge, 2.5 gpm on 4-23-59.	Casing: 2-in. to 40 ft.; none below. Measured discharge, 1.0 gpm on 3-18-59.	Measured discharge, 1.0 gpm on 3-18-59.	
nations	Hardness as CaCO3 (ppm)	20	34	40	18	40	:		30	:	:	48	06	28	34	12	∞	14
Field determinations	Chloride (Cl)	25	25	11	11	32	:	•	4	18	:	4	4	11	11	-	4	4
Field	Temperature (°F)		:	: :	:	:	:	:	:	67	÷	:	:	19	89	99	66.5	:
	Use of water	D, S	D, S	D	D, S	D,S	Z	Д	D,S	z	Z	D, S	D, S	Ø	ß	w	D,S	О
	Method of lift	Cy	Cy	Cy	r	J	Z	Cy	Cy	M	M	Cy	Cy	[E4	ĹΤι	Ħ	Ŀı	[E4
level	Date of meas- urement		459	* * * * * * * * * * * * * * * * * * * *	459	do	8-24-59	859	:	:	:		628	459	op	3-18-59	359	. op .
Water level	Above (+) or below land surface (feet)		09	:	09	34	137.0	137	:	:	:	:	138	+ 4	0	+ 3.6	+	+
	Altitude of land (1991) saltus	310	322	•	306	321	320	320	:	•	303	:	320	150	139	186	190	185
	Water-bearing unit	Ke (?)	Ke	Ke (?)	Ke (?)	Ke	Ke	Ke	Ke	(?) Ke	Ke	Ke	Ke	Ke (?)	Ke (?)	Ke	Kg	Kg
I	Diameter of wel	4	4	က	$3, 2^{\frac{1}{2}}$	30	က	4	က	м	4	4	4	က	2	23	2	m
	Depth of well (feet)	400	350	350	360	40	200	350	400	425	300	280	440	350	:	09	340	260
	Type	Dr	Dr	Dr	Dr	Du	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr
	Driller	Austin Stouden- mire.	op	op	O. E. Golson			Watson Drilling Co.	Radford and Son.	Alex Stoudenmire Well & Supply Co.		Watson Drilling Co.	op		:	Alex Stoudenmire Well & Supply Co.	· · · · · op · · · ·	
	Owner	H. T. Underwood Estate.	A. C. Houston	Della Whetstone	O. E. Golson	Joe K. Clifton	T. F. Gober	op	W. E. Tyus	A. C. Houston	J. A. Lambert	Bama River Ranch .	op	G. D. Whetstone	Bama River Ranch .	J. B. Neighbors	· · · · · · · op · · · ·	Whitewater Lake,
.oV	Well or spring 1	0- 3	0- 4	0- 5	9 -0	0-7	0-8	6 -0	0-10	0-11	0-12	0-13	0-14	0-15	0-16	* p- 1	P- 2	P. 3

	Measured discharge, 3.0 gpm on 3-19-59.		Casing: 4-in, to 220 ft.; none below. Well not in use because of caving and highly mineralized water.		Measured discharge, 4.4 gpm on 3-19-59.	Supplies 215 pupils.	Supplies 215 pupils. Reported to flow when not in use.	Estimated discharge, less than 1 gpm on 3-19-59.	Casing: 2-in. to 320 ft.; lower 20 ft. perforated. Measured discharge, 5.1 gpm on 3-19-59.	Estimated discharge, 10 gpm on 3-19-59.	Supplies 950 pupils.	Measured discharge, 1.0 gpm on 3-26-59. Supplies 2 homes.	Measured discharge, 5.5 gpm on 3-19-59.	Casing: 4-in. to 60 ft.; $1\frac{1}{2}$ -in. from 60 to 320 ft. Measured discharge, 15. 6 gpm on 8-17-40. Unable to measure head or discharge in 1959. Owner reported no decrease in head or discharge during past 30 years.	Estimated discharge, 15 gpm on 3-19-59. Owner reported no decrease in head or discharge during past 30 years.	Estimated discharge, 30 gpm on 3-26-59.	Measured discharge, 10.0 gpm on 3-26-59.	Measured discharge, 1.1 gpm on 3-26-59.	Measured static water level, 20.5 ft. above surface on 8-17-40. Measured discharge, 1.7 gpm on 2-18-59; 3.8 gpm on 8-17-40.	Measured discharge, 2.0 gpm on 3-26-59.
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	89	66.5	:	:	89	:	:	64	69	68.5	89	67.5	89	899	89		89 .	. 66.5	29	
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	3-19-59	359	459	:	359	:	359	op	. op .	do	do	359	3-19-59	1940	op	359	3-26-59	359	259	3-26-59
	+ 9.0	+ 14	06	•	∞ +	:	14	+ 1.5	6 +	+ 2	4	ლ +	+ 25	30	+ 18	+ 15	+ 12.5	+ 2	+ 2	+ 4.0
	161	168	325	295	154	:	170	152	148	150	151	159	160	150	148	153	159	158	157	149
	Kg	Kg	Ke	Ke	Kg	Kg	Kg	Kg	Kg	Kg	Kg	Kg	Kg	Kg	Kg	Kg	Kg	Kg	Kg	Kg
	2	4,3	4	က	7	2	m	2	22	9	2	23	$2\frac{1}{2}$	4, 122	4	$2\frac{1}{2}$	2, 14	2	7	2
	300	300	330	175	300	300	300	390	320	320	320	300	275	320	290	350	330	320	260	350
	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr
	:		Radford and Son .	Austin Stouden- mire.	Alex Stoudenmire Well & Supply Co.			Austin Stouden- mire.	Alex Stoudenmire Well & Supply Co.	Leonard Carter .	Austin Stouden- mire.			R. S. Thompson.	Hicks Brothers	Bentley Clark			Alex Stoudenmire Well & Supply Co.	
	G. C. Youngerman.	W. R. Thompson	W. P. Jones	J. W. Plaster	Maryanne Whetstone	Hicks Memorial	op	Clarence Golson	Hamp Smith	Jones Brothers Gin Co.	Autauga County Training School.	R. G. Shanks	G. C. Youngerman.	Crystal Lake Broom Co.	op	Rufus Pierson	Carl Stewart Estate.	R. G. Shanks	G. C. Youngerman.	op
	P- 4	P- 5	P- 6	p- 7	P- 8	P- 9	P-10	P-11	P-12	P-13	P-14	P-15	P-16	* P-17	P-18	P-19	P-20	P-21	P-22	P-23

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asing: 2-in. to 300 ft.; none below. Estimated discharge, less than 1 gpm on 3-26-59. Estimated discharge, 20 gpm. Supplies 3 homes Measured Casing: 4-in. to 200 ft.; 3-in. screen from 200 to 210 ft. Estimated discharge, 20 gpm on 11-10-58. Supplies 3 homes and service Known as well No. 2. Reported yield 450 gpm. See sample, driller's, and electric logs. Casing: 2- and 3/4-in. to 400 ft.; none below. Measured discharge, 1.7 gpm on 4-14-59. Casing: 18-in. to 322 ft.; 8-in. from 262 t 555 ft.; 8-in. screen from 327 to 362 ft. Irrigates tree nursery. See sample and Measured discharge, 8.2 gpm on 3-19-59. and from 520 to 545 ft. Drawdown, 103 ft. after pumping 220 gpm for 24 hours. Estimated discharge, 10 gpm on 1-22-59. Measured discharge, less than I gpm on 3-26-59. Estimated discharge, 6 gpm on 1-22-59. Casing: 2-in. to 300 ft.; none below. asing: 2-in. to 400 ft.; none below. discharge, 4.5 gpm on 4-14-59. Supplies 2 homes and store. Remarks Supplies 2 homes. driller's logs Casing: 2-in. and stock. (wdd) 9 10 16 10 14 32 10 14 16 10 12 Field determinations 24 24 C³CO³ Hardness as (CI) 4 4 4 18 4 4 1 4 Ξ 11 1 11 Chloride Temperature (F) 69 70 68 69 89 89 99 99 99 29 67 D,S D, S S S Irr Irr Д Ω Ω Д Use of water S S S S ď, Ď, Method of lift [4 H 14 ഥ H 14 Ŀ H H 7 3-59 -59 -59 -59 -59 -59 3-26-59 urement Date of meas-ဓ оþ level 3, Water surface (feet) 137.1 2.5 3.3 2.5 pejow jand 9 က 2 22 To (+) SvodA surface (feet) 300 210 205 302 142 146 149 150 176 157 224 207 Altitude of land ŋţun Ke Kg Ke Kg Kg Kg Kg Ke Kg \mathbf{Kg} Kg Kg (√2) Kg Kg Kg Kg Water-bearing 3/4 (inches) $2^{\frac{1}{2}}$ 4 2 2 2 2 24 က 2 က 4 18, 18, ς, Diameter of well Depth of well (feet) 555 620 210 185 425 350 40 200 185 200 300 450 350 Dr Dr Dr Dr Dr Dr Dr ದ Dr Dr Dr Dr Dr Dr Type Alex Stoudenmire Well & Supply Co. Alex Stoudenmire Well & Supply Co. Alex Stoudenmire Austin Stouden-Well 2 Supply Co. Layne-Central Driller op oр оþ op mire. S Terry Walls.... Davis, Jr... Youngerman Youngerman Autaugaville State S. Murfee. Clifford Meeks Lamar Service Station. Wright. J. C. Stewart Estate. Norris Owner Algie Walls Nursery. op op . . . ပ ပ ပ Ö. 回 Z. Ġ i င် ن Ö P-25 P-24 P-26 P-27 P-28 P-29 P-30 2 က 4 S 9 <u>r</u>-Well or spring No. چ 4 4 چ-8 چ

	Measured discharge, 18.5 gpm on 1-29-59. Well reported to have been flowing for more than 50 years.	Casing: 2-in. to 260 ft.; lower 20 ft. perforated. Estimated discharge, 30 gpm on 2-18-59. Supplies water to lake which is used periodically for irrigation of crops and pastures.	Measured discharge, 1.7 gpm on 2-18-59. Supplies 3 homes and stock.	Casing: 2-m. to 60 ft.; 1½-in. from surface to 290 ft.; lower 20 ft. perforated. Measured discharge, 9.6 gpm on 2-18-59. Supplies home and swimming pool.	Casing: 2-in. to 60 ft.; 1½-in. from surface to 265 ft.; löwer 20 ft. perforated. Measured discharge, 3.6 gpm on 2-18-59. Supplies home and store.	Casing: 2-in. to 225 ft.; lower 20 ft. perforated. Estimated discharge, 10 gpm on 2-18-59. Supplies home and swimming pool.	Casing: 2-in. to 215 ft.; lower 15 ft. perforated. Estimated discharge, 2 gpm on 2-18-59.			Casing: 3- and 2-in. to 200 ft.; none below.	Reported static water level, 18 ft. below surface in August 1940.	Casing: 2-in. to 220 ft.; lower 20 ft. perforated. Measured discharge, 0.7 gpm on 2-18-59.	Casing: 2-in. to 220 ft.; lower 20 ft. perforated. Measured discharge, 14.1 gpm on 2-18-59. Supplies 2 homes.	Measured discharge, 2.7 gpm on 2-18-59.	Do.	Casing: 2-in. to 250 ft.; lower 20 ft. perforated. Measured discharge, 9.6 gpm on 2-18-59. Supplies fish pend and stock.
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:	67	:	29	29	29	29	29	:	:	:	:	29	89	. 89	29	89
Z	Ω	Irr	D, S	A	А	Q	Д	D, S	Q	D, S	D, S	Ω	Q	w	S	D, S
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	:	259	:	259	op	op	•		259	do	op	op	:	259	:	259
:	:	+ 12	:	+ 15	+ 12	+ 15			10	0	20	+ 2	:	+		+
:	157	155	158	159	156	161	157	343	179	185	341	163	:	162	:	168
Kg (2)	K	Kg (?)	Ke (?)	X So	(2)	Ke	Ke	Kg (?)	3t	Ke	Qal (?)	Ke	Ke	Ke	Ke	Ke
22.2	S	8	2	2, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,	2, 1, 4, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,	73	2	4	m	3,2	36	2		12	2, 1/2	7
200	200	260	250	290	265	225	215	365	09	250	24	220	220	225	225	250
Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr.	Dr	Da	Dr	Dr	Dr	Dr	Dr
- - - - - - - - - - - - - - - - - - -	Austin Stouden- mire.	Alex Stoudenmire Well & Supply Co.	:	Alex Stoudenmire Well & Supply Co.	op	James A. Stou- denmire,		James A. Stoudenmire.	Alex Stoudenmire Well & Supply Co.							Alex Stoudenmire Well & Supply Co.
Terry Walls	Hunter Vaughn, Jr .	G. C. Youngerman .	M. S. Murfee	E. L. Clark		M. S. Murfee	op	C. C. Fonnville	L. E. Rogers	op	Paul L. Smith	, G. C. Youngerman .	op	M. S. Murfee	· · · · · op · · · ·	· · · · · · · · · · · · · · · · · · ·
. %	6 - è	·2-10	2-11	Q-12	2-13	Q-14	. Q-15	Q-16	Q-17	Q-18	Q-19	Q-20	2-21	Q-22	Q-23	Q-24

1 Casing: 6-in. to 142 ft.; 4-in. screen from 142 to 154 ft. See sample and driller's logs. Casing: 4-in. to 220 ft.; 3-in. screen from 220 to 225 ft. ft.; 6-in. screen from 177 to 218 ft. Reported yield, 197 gpm in 1947. Reported to flow when not in use. See sample and driller's Casing: 8-in. to 170 ft.; 6-in. from 157 to 177 Supplies See sample, driller's, and Well has been Measured discharge, 12.0 gpm on 2-19-59. Casing: 4-in. to 144 ft.; none below. Reported yield, 200 gpm on 9-2-59. cotton mill. Casing: 24-in. brick to 52 ft. Remarks use since about 1830 Test hole for oul. Supplies 2 homes electric logs CaCO3 (ppm) determinations 184 10 46 32 18 22 24 20 132 Hardness as 4 4 4 (CI) 11 39 = 11 Ξ 11 Chloride Field 67.5 Temperature (T°) 68 D, S D,S D, S D,S Use of water Z Ω Ω Z Irr Ω z Ω Ω Ind Ind Ω C Ç C Ç Ç Ç Method of lift z Œ, Z H z H H H Ē **-**-59 -58 -58 9-59 11-13-59 -58 -59 nrement Date of measlevel 2-9-9-9-Water below land surface (feet) 98.5 64.1 39 က 22 55 က To (+) SvodA + + 337 280 405 surface (feet) 157 360 264 186 Altitude of land nuit Ke Kck ₹e ₹. Ke (?) Ke $\mathbf{K}_{\mathbf{g}}$ Kg Kg $\mathbf{K}^{\mathbf{g}}$ Kg (?) Ke Kg $K_{\mathcal{S}}$ Kg Kg 4 Water-bearing 8,6 (inches) $\frac{3}{2}$ 9 4 2 10 30 က 24 က က က က 8 24 Diameter of well (feet) 250 ,256 42 150 52 125 154 162 72 150 218 175 135 137 225 230 Depth of well Dr Dr Z Dr D Dr Dr Pr Dr Dr D Dr Dr Dr Dr Dr Llpe Alex Stoudenmire Well & Supply Co. Alex Stoudenmire Alex Stoudenmire Austin Stouden-mire. Well & Supply Co. Modern Drilling Acme Drilling Co. Well & Supply Co. Driller op op op · · · · op ob . . . S S Prattville Memorial Henderson Prattville Ice and Coal Co. L. Yarbrough B. Dominick Rosa, do M. Doster. Jerico Baptist Church. Gurney Manu-facturing Co. Alexander Oil Test No. 1. Owner Smith Green Estate Boone Estate. Hull. Test No. Gardens. Frank Y. Σ 回 æ, ь. Lee `. `. Ö. Ö. H. ပ *2-26 S R-10 R-12 2-27 2 က マ 9 <u>-</u>-8 6 R-13 Well or spring No. Ŗ-Ŗ-R-R-R-R-R-R-R-

Measured discharge, 2.0 gpm on 9-2-59; 5.0 gpm on 10-29-04.	Casing: 2-in. to 70 ft.; none below. Measured static water level, 13 ft. above surface on 10-29-04. Measured discharge, 12 gpm on 10-29-04; estimated discharge, 5 gpm on 9-2-59. See driller's log.	Casing: 6-in. to 169 ft.; 4-in. screen from 169 to 189 ft. Supplies swimming pool and 2 lawns.	Supplies tourist court and restaurant.	Observation well, 1959. Casing: 5- and 3-in. to 183 ft.; 3-in. screen from 183 to 186 ft.	Reported yield, 30 gpm in September 1958. Supplies home and stock.	Casing: 3-in. to 197 ft.; 3-in. screen from 197 to 200 ft.		Supplies 3 homes and dairy.		Supplies several tenant homes and stock.	Supplies several homes.		Casing: 5-in. to 105 ft.; 3-in. from 105 to 145 ft.; 3-in. screen from 145 to 185 ft. See driller's log.	Estimated discharge, 25 gpm on 10-28-58.	Measured static water level, 11.9 ft. above surface on 8-13-40. Measured discharge, 4.4 gpm on 8-13-40; estimated discharge, 4 gpm on 10-27-58.	Measured static water level, 17.7 ft. above surface on 10-25-40. Measured discharge, 4.9 gpm on 10-25-40; estimated discharge, 2 gpm on 9-21-59.
20	40	22	:	:	:	:	120	104	:	128	114	:	112	22	24	:
41	4	11	•		:	:	18	11	:	18	18		Ξ	=======================================	Ħ	:
19	29	:	:	:	:	:	:	68	:	:	:		•	66.5	29	99
Z	Ф	Irr	P	0	D, S	Q	Q	D, S	Z	D,S	D, S	0	Д	þų	A	P ₁
드	ſ c ,	H	Cy	Z	H	Cy	Ç	Cy	Cy	Cy	Cy	Z	H	<u>F</u> 4	I	<u>[24</u>
959	· · op · ·		:	9-18-58	9-22-58	:	:		•	•	:	9-25-58	10- 9-59	:	10-27-58	
0	÷ دن			148.8	139.2		•	:			:	91.5	77.7	•	4.8	
228	200	*	:	408	406				:	:		312	289	190	189	187
Kg (?)	Ke	Kg	Kg	Kg	Kg	Kg	Kg	Kg	Kg	Kg	Kg (?)	Ke	Kg (?)	Ke (?)	Kg	K
2	67	9	4	5, 3	_∞	m	က	್ಷ	2	4	e0	دا د	ى ئ	က	ಞ	N
123	66	189	200	186	225	200	164	186	200	185	160	141.0	185	100	300	100
Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr
:		James A. Stou- denmire.	Alex Stoudenmire Well & Supply Co.	op	Layne-Central Co.	Alex Stoudenmire Well & Supply Co.	Austin Stou-denmire.	James A. Stou-denmire.			Owen Murphey		Acme Drüling Co.	Alex Stoudenmire Well & Supply Co.	Austin Stouden- mire.	
Malcolm Graham Estate.	Prattville Elemen- tary School.	G. E. Newton	Winter Gardens Motel.	William E. Mat- thews III.	do	op	Jennie Quinn Gresham.	McQueen-Smith Farms.	· · · · · · op · · · ·	· · · · · op · · · ·	Jennie Quinn Gresham.	Standard Oil Co	Sunset Trailer Park	Prattville Zuick Freeze.	Prattville Swim- ming Pool.	op
R-14	R-15	R-16	R-17	R-18	R-19	R-20	R-21	R-22	R-23	R-24	R-25	R-26	R-27	R-28	R-29	R-30

	Casing: 4-in. to 110 ft.; none below. Reported yield, 35 gpm in 1953. Supplies 20 to 30 home trailers.				Supplies home and service station.		Measured static water level, 2.0 ft. above surface on 8-17-40. Estimated discharge, less than 1 gpm on 9-24-58.	Estimated discharge, 10 gpm on 9-17-58.	Casing: 4-in. to 155 ft.; 2-in. screen from 155 to 172 ft. Supplies 2 homes and stock.	Casing: 8-in. to 412 ft.; casing slotted and gravel-walled from 120 to 412 ft. Reported yield, 300 gpm in 1958. Irrigates crops and pastures. See electric log.	Casing: 4-in. to 180 ft.; 3-in. screen from 180 to 200 ft.	Casing: 3- and 2-in. to 200 ft.; lower 20 ft. perforated. Reported discharge, 8 gpm in November 1958. Supplies 10 homes.			Supplies 4 homes and stock.	Estimated discharge, 5 gpm on 10-30-58. Well formerly flowed about 35 gpm.	Casing: 6-in. to 400 ft. Reported yield, 40 gpm in 1958. Supplies home and chicken farm.	Well is reported to flow in winter and spring.	45
	144	142	:	30	140	136	97	100	10	30	38	10	:	12	22	20	22	20	16
	18	18	:	11	11	18	18	v-4	4	=	18	11	:	. 4	4	Ħ	11	111	2
	:	:	:	89	:	:	68.5	89	:	89	:	89	:	:	÷	68	:	:	
	Д	D, S	Z	D,S	Д	Q	Д	W	D, S	lrr	D, S	Ω	z	D,S	D, S	D, S	D,S	D,S	D, S
,	L	J.	Cy	ſ	Cţ	5	Cţ	ſz,	Cy	H	Cy	[14	z	٦	٦	[F4	H	r	٦
	958	:	:	9-17-58	9-24-58		958	ob		: : :	:	:	10-30-58	11-13-59	. · op · ·	:	1058	op	10-30-58
	70	:	:	78.0	19.8	:	+	9 +	:	•	:		. 2	25.9	31.2		100	2	23.4
	272	:	:	369	175	:	171	158	276	•	:		180	206	198	155	280	165	153
	Ke	Ke	Kg (?)	Ke .	Ke	Ke	Kg	Kg	Ke (?)	Ke	Kg	Kg	Kg (?)	Ke	Ke	Kg	Kg	Kg	Ke
	4	4	4	22	2	4	4	2 2 2	4	8	4	3, 2	60	4	4	2	9	4	4
	170	100	200	150	130	80	220	200	172	412	200	200	200	180	100	376	400	200	92
	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr
	Alex Stoudenmire Well & Supply Co.	op		:	Alex Stoudenmire Well & Supply Co.	op	Austin Stouden- mire.		Alex Stoudenmire Well & Supply Co.	Watson Drilling Co.	James A. Stoudenmire.	Alex Stoudenmire Well & Supply Co.		Austin Stouden- mire.	Alex Stoudenmire Well & Supply Co.	Austın Stouden- mire.	James A. Stou- denmire.	op	
	Longview Trailer Court.	John l. Moore	McZueen-Smith Farms.	op	Trammell Oul Co	Red Devil Service Station.	Water Wheel Restaurant.	McJueen-Smith Farms.	Prattville Experiment Station.	Jack Whittaker	do	W. H. Reynolds	I. E. Dupont Corp	C. D. Reynolds	Graves Hall	H. H. Thomas	W. J. Lipscomb	F. L. Lipscomb	Tull Plantation
	R-44	R-45	R-46	R-47	R-48	R-49	R-50	R-51	R-52	R-53	R-54	R-55	R-56	R-57	R-58	R-59	R-60	R-61	*S- 1

3																					
		Remarks	Well flowed until 1955.	Well at site flowed until 1955.	Well reported to flow when not being pumped.	Measured discharge, 1.2 gpm on 3-2-59.	Well flowed until 1955.	Estimated discharge, 15 gpm on 10-30-58.	Casing: 4-in. to 400 ft.; lower 20 ft. perforated. See driller's log.	Casing: 2-in. to 400 ft.; none below. Measured discharge, 2.2 gpm on 4-14-59.	Reported to flow in winter.	Casing: 4-in. to 450 ft. Measured discharge, 10.0 gpm on 2-26-59.	Measured discharge, 0.8 gpm on 2-26-59.		Measured discharge, 24.0 gpm on 2-26-59. Supplies 2 homes and stock.	Casing: 3-in. to 400 ft.; lower 20 ft. perforated. Measured discharge, 6.3 gpm on 2-24-59.	Measured discharge, 2.7 gpm on 2-26-59.		Casing: 3- and 2-in. to 400 ft. Measured discharge, 1.0 gpm on 2-26-59.		
	Field determinations	Hardness as CaCO ₃ (ppm)		24	12	12	:	16	:	12	:	18	∞	:	16	:	14	:	14	12	
	determ	Chloride (Cl)		11	4	11	:	11	:	4	:	4	4	:	4	:	4	:	4	4	
	Field	Temperature		89	:	29	:	89	:	89	:	69	89	:	69	:	29	:	89	:	
		Use of water	z	Ø	D, S	W	Z	ω	D, S	w	D,S	ω	D, S	w	D,S	w	Ø	D,S	w	Ω	
		Method of lift	z	r	Cf	ഥ	z	<u>r</u>	Cy	Ŀı	Cf	ഥ	ഥ	Ē	ഥ	ഥ	ഥ	Ç	ഥ	C	
	level	Date of meas- urement	10-30-58	:	:	3- 2-59	10-30-58	ob	259	4-14-59	:	259	ob	:	:	259	ob	:	259	2-24-59	
	Water level	Above (+) or below land surface (feet)	+ 0.1	:	:	+ 8.7	3.0	9 +	10	+ 7.0	:	+ 4	+ 2	:	:	4.	+ 2	:	+ 2	25.	
		Altitude of land (1991) sartus	153	:	150	150	150	130	174	142	:	150	146	:	151	154	153	÷	157	153	
		Water-bearing unit	Kg	Kg	Kg	Kg	Kg	Kg	Kg	Kg	Kg	Kg	Kg	Kg	Kg	Kg	Kg	Kg (?)	Kg	Kg	
	ΙΙ	Diameter of we	က	4	2	က	2 2/2	ಣ	4	8	4	4	က	က	က	က	3,3/4	87	3,2	23	
		Depth of well (feet)	300	300	400	400	300	300	400	420	450	450	300	450	400	400	400	350	400	400	
		Type	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr	
		Driller		W. J. Bozeman, Jr.	James A. Stou- denmire.	op		W. J. Bozeman, Jr.	James A. Stou-denmire.	Alex Stoudenmire Well & Supply Co.				Alex Stoudenmire Well & Supply Co.	· · · · · op · · · ·	op	· · · · · op · · · · ·	op	op	· · · · · op · · · ·	
		Owner	Till Plantation	do	Will Howard Smith .	op	Tull Plantation	op	Wadsworth Plan- tation.	A. R. Jones	Emory Jones	op	Charles Alexander .	op	Will Howard Smith .	Wadsworth Plan- tation.	Will Howard Smith .	op	Graves Hall	Posten Ranch	
	.oV	Well or sprng	S-2	S - 3	S - 4	S- 5	9 -S	S- 7	T- 1	T- 2	T-3	T- 4	T-5	9 - L	T-7	T- 8	T- 9	T-10	T-11	T-12	

												47
Measured discharge, less than 1 gpm on 2-26-59.	Well flowed until 1957.	Casing: 2-in. to 420 ft. Measured discharge, 12.6 gpm on 3-26-59.	Casing: 1-in. to 100 ft.; none below. Estimated discharge, less than 1 gpm on 4-14-59.	Casing: 4- and $2\frac{1}{2}$ -in. to 400 ft. Measured discharge, 1.1 gpm on 4-14-59. Supplies home and chicken farm.	Measured discharge, 2.5 gpm on 4-14-59.	Estimated discharge, 3 gpm on 4-23-59.	Supplies home and swimming pool.	Measured discharge from $\frac{1}{2}$ -in. pipe, 3.2 gpm on 4-23-59; well capped and equipped with float valve to prevent water waste.	Measured discharge from $\frac{1}{2}$ -in. pipe, 2.9 gpm on 4-23-59; well capped and equipped with float valve to prevent water waste.	Electric log shown on plate 3. See sample and driller's logs of test well drilled to depth of 1,219 ft.		Abandoned and filled. See driller's and sample logs.
10	10	16	20	12	18	40	240	278	202	∞	2	•
4	4	11	11	11	11	, 	422	592	443	27	2	•
29	:	68, 5	67	89	20	67.5	:	65	69		89	
D, S	W	D, S	Ø	D, S	Ω	ω	Q	W	W	Z	z	Z
<u>F</u>	Ç	<u>F4</u>	[*	ĹΣ-	ŗ.	F-4	السا	Ľ.	Γ±4		:	Z
259	do	359	459	op	:	459		:	:	2-19-52	2-26-52	
8	10	es +	÷ دی	- 5	:	es +			+	15.3	14.0	
149	152	146	143	147	142	139	:	126	126	146	146	153.9
	Kg	Kg	Ke	Kg	Kg	Ke (?)	Ke	Ke	Ke	Ke	Kg	:
က	23	2		$4, 2^{\frac{1}{2}}$	2	23	4	4	4	9	9	
400	400	420	420	400	527		400	400	400	200-281	450- 521	23.8
Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr	Dr		Dr
Alex Stoudenmire Well & Supply Cc.	:	:		:	Bentley Pugh					Layne-Central Co.		
Will Howard Smith	"Nadsworth Plan- tation.	J. M. Golden	do	L. D. Wright	J. M. Golden	Bama River Ranch .	John B. Armstrong.		op	City of Montgomery.		
T-13	T-14	U- 1	U- 2	U- 3	U- 4	V- 1	V- 2	V - 3	V - 4	*Mtg. T'V-109		*Mtg. TW-112

Table 2. -- Chemical analyses of water from selected wells in Autauga County, Ala.

(Results in parts per million except as indicated)

Well No.: Numbers correspond with those in plate 1 and table 1.

Water-bearing unit: Ke, Eutaw formation; Kg, Gordo formation; Kck, Coker formation; Qt, High terrace deposits.

		1)														 	
	Temperature (°F)		99	99	•	70	89	:	99	89	:	:	•	•	89		
	Hq	6.3	6.4	9.9	5.4	7.1	•	6.7	9.9		5.4	7.2	6.1	8.6	7.0		
	Specific conducts (micromhos at 2	34. 5	3i.4	33.9	41.5	107	:	79.0	39.8	:	54.8	97.5	64.4	619	48.7		
ss as	Noncarbonate	0	0	0	4	0		0	0		<u> </u>	0	9	0	0		
Hardness as CaCO ₃	IstoT	8	9	111	7	38	21	27	12	8	10	36	16	∞	7		
	Vitrate (NO3)	0.2	0.	2.	13	1.	:	. 1	0.	•	15	1.	15	1.0	٠. د		
	Fluoride (F)	0.1	.1	1.	0	.2	4.	9.	. 2	.1	. 1	Τ.	1.	2.8	0		
	Chloride (Cl)	8.0	1.5	1.0	3.2	1.0	2.0	2.0	1.2	1.0	4.0	1.5	5.0	27	2.0		
	Sulfate (SO ₄)	5.6	4.	1.2	1.2	3.6	3.0	7.2	4.	1.0	4.	4.0	0.	1.0	က		
	Carbonate (CO3)	0	0	0	0	0	:	0	0	:	0	0	0	11	0		
(60)	Dicarbonate (HC	13	16	18	4	09	32	34	21	11	က	56	11	401	24		
	(sN) muibo2	2.7	1.2	1.5	3.8	3.8	:	2.3	1.3	•	4.7	5, 6	4.6	:	:		
	(Fe) (in solution)	0.04	. 03	. 02	. 12	. 17	:	3.4	. 04		. 05	. 01	. 05	. 24	. 16		
1į tri	Water-bearing u	Kg (?)	Kg	Kg	Kg	Ke	Ke	Ke	Ke	Kg	o t	Kg Kck	Ke	$\mathrm{Ke}^{1/}$	${\rm Kg}^2/$		
u	Date of collectio	12- 1-59	op	op	op	ob	10-29-40	12- 1-59	op	10-29-40	12- 1-59	ob	op	2-20-52	2-23-52		
	Owner	Holy Ghost Mission School	D. M. Parker	L. B. Burmeister	Pine Level High School	Rastus McLendon	· · · · · · · · · · · · · · · · · · ·	G. E. Treadwell	J. B. Neighbors	Crystal Lake Broom Co	W. B. Dominick	City of Prattville	Till Plantation	City of Montgomery	op		
	Well No.	A- 5	D- 8	F- 4	Н-21	N- 2	N - 3	0- 2	P- 1	P-17	2-26	R-40	S- 1	Mtg. TW-109	Do.		

	29	89	69
	6.3	7.3	8.1
	99.7	117	143
	6	0	0
	30	12	29
	0.2	4.	. 2
	0.2	2.	0
	ω 	3.0	3.0
	12	9	. 2
	0	0	0
	26	64	84
	•	:	:
	0.08	. 32	80.
	$\mathrm{Ke}^{3/}$ 0.08	${\rm Kg}^4/$	${\rm Kg} \overline{2}/$
	3-12-52	3-14-52	3-21-52
	City of Montgomery	op	do
	Mtg. TW-112	Do.	Do.
٠			

1/2 Interval sampled 200-281 feet (Eutaw formation). 1/2 Interval sampled 450-521 feet (Gordo formation). 1/2 Interval sampled 97-140 feet (Eutaw formation). 1/2 Interval sampled 233-310 feet (Gordo formation). 1/2 Interval sampled 233-310 feet (Gordo formation).

Table 3. -- Sample logs of wells in Autauga County, Ala.

		kness	Depth
	(16	eet)	(feet)
Well E-4 Owner: Transcontinental Gas Pipe Driller: Layne-Central Co.	Line		
Gordo formation:			
Granules and pebbles; pale-yellowish-orange very coarse-grained, subrounded to rounded ferruginous sand; and varicolored sandy clay		20	20
Clay, varicolored, sandy, slightly micaceous, an yellowish-orange subrounded to rounded cherty ferruginous pebbles		45	65
Clay, moderate-reddish-brown, sandy, slightly micaceous, and yellowish-orange subrounded to rounded cherty pebbles	ů	23	88
Coker formation(?):			
Sand, very pale-orange to white, coarse-grained, angular to subangular, slightly micaceous, and some varicolored sandy micaceous clay	0	22	
Clay, gray and varicolored, sandy, micaceous, lignitic, and very pale-orange coarse-to very coarse-grained, angular to subangular sand	0	24	134
Sand, very pale-orange to white, medium-to coarse-grained, angular to subangular, clayey, and dark-gray sandy lignitic clay	٠	21	155
Clay, gray, fissile, slightly sandy, lignitic, mica ceous, and pale-yellowish-orange coarse- to ve coarse-grained, with granules, subangular to rounded ferruginous sand	ry	22	177

Table 3. -- Sample logs of wells in Autauga County, Ala. -- Continued

	Thickness	Depth
	(feet)	(feet)
Well E-4Continued		
Coker formation(?)Continued		
Clay, gray, fissile, slightly sandy, micaceous, lignitic, very fossiliferous, and numerous fossil fragments	. 45	222
Clay, gray, slightly sandy, micaceous, lignitic,		0.4.0
fossiliferous, and white calcareous sandstone.	. 21	243
Clay, gray, sandy, micaceous, lignitic, slightly fossiliferous	. 23	266
Clay, gray, sandy, micaceous, lignitic, fossili- ferous; light-greenish-gray coarse- to very coarse-grained, angular to subangular slightly glauconitic sand; and light-gray calcareous		
slightly micaceous sandstone	. 23	289
Clay, gray, sandy, micaceous, lignitic, fossili- ferous, and yellowish-gray coarse- to very coarse-grained sand, with some subangular to subrounded granules and pebbles	. 22	311
Sand, very pale-orange to white, very coarse- grained, with some angular to subangular granules, and gray sandy micaceous lignitic fossiliferous clay	. 44	355
Sand, pale-yellowish-orange, medium- to coarse grained, angular to subangular, clayey, mica-ceous, slightly lignitic and ferruginous		377
Sand, very pale-orange, coarse- to very coarse-grained, with some angular to subangular slightly micaceous granules; varicolored sandy micaceous clay; and gray sandy micaceous lignitic clay		398

Table 3. -- Sample logs of wells in Autauga County, Ala. -- Continued

. *	Thickness (feet)	Depth (feet)
Well E-4Continued		
Pre-Cretaceous rocks:		
Sand, pale-yellowish-orange, coarse- to very coarse-grained, with some angular to sub-rounded granules and pebbles; varicolored sandy micaceous clay; gray sandy micaceous lignitic clay; and dark-greenish-gray chloritic biotitic schist	. 20	418
Well O-14 Owner: Bama River Ranch Driller: Watson Drilling Co.		
No record	. 230	230
Eutaw formation:		
Sand, light-greenish-gray, fine- to medium- grained, angular to subangular, well-sorted, glauconitic, slightly micaceous, with some light-gray micaceous, glauconitic clay	. 42	272
Sand, light-greenish-gray to yellowish-gray, fine- to medium-grained, angular to subangular, well-sorted, glauconitic, slightly micaceous, and light-gray to yellowish-gray glauconitic micaceous sandy clay		· 293
Sand, yellowish-gray to light-greenish-gray, medium-grained, well-sorted, very glauconitic, micaceous, and abundant light-gray to brownish gray glauconitic micaceous sandy clay	-	314

Table 3. -- Sample logs of wells in Autauga County, Ala. -- Continued

•	Thickness (feet)	Depth (feet)
Well O-14Continued		
Eutaw formationContinued		
Sand, light-greenish-gray to yellowish-gray, medium- to coarse-grained, angular to subangular, well-sorted, glauconitic, slightly micaceous, with small amount of gray to brownish-gray glauconitic micaceous sandy clay	. 42	356
Sand, light-greenish-gray to yellowish-gray, medium-grained, angular to subangular, well-sorted, slightly glauconitic and micaceous, with some light-brownish-gray glauconitic micaceous sandy clay	S	377
Clay, gray to light-brownish-gray, sandy, slightly glauconitic and micaceous, and yellowish-gray medium-grained, angular to subangular slightly glauconitic sand	,	419
Sand, light-yellowish-gray, fine- to medium- grained, angular to subangular, well-sorted, glauconitic, micaceous; light-gray to brownish- gray glauconitic micaceous sandy clay; and small amount of pale-red-purple to moderate- reddish-brown micaceous silty clay		440

Table 3. -- Sample logs of wells in Autauga County, Ala. -- Continued

	Thickness (feet)	Depth (feet)
Well P-25 (Samples described by C. W. Drenne Owner: Autaugaville State Nurser Driller: Layne-Central Co.		
No record	. 21	21
Terrace deposits:		
Sand, light-red, medium-grained, with some coars ferruginous pebbles		44
Granules and pebbles, subrounded	. 23	67
Eutaw formation:		
Clay, yellow, sandy, with some quartz pebbles	. 21	88
Clay, gray, fissile, sandy, glauconitic	. 22	110
Sand, yellow, medium-grained, glauconitic	. 21	131
Clay, gray, fissile, with light-brown medium-grained glauconitic sand	, 22	153
Sand, greenish-yellow, medium-grained, with fragments of gray waxy glauconitic clay	23	176
Sand, greenish-gray, medium-to coarse-grained, very glauconitic, and fragments of brownish-gray fissile clay	. 23	199
Sand, yellowish-green, medium-grained, very glauconitic, and fragments of brownish-gray fissile clay	22	221
Sand, yellowish-green, coarse-grained, very glauconitic, and fragments of brownish-gray fissile clay	23	244

Table 3. -- Sample logs of wells in Autauga County, Ala. -- Continued

	Thiston	Desetle
	Thicknes (feet)	ss Depth (feet)
Well P-25Continued		
Eutaw formationContinued		
Sand, green, medium-grained, very glauconitic, with fragments of gray fissile clay	. 22	266
Sand, yellowish-green, medium-to coarse- grained, very glauconitic, with fragments of gray waxy clay	. 23	289
Clay, gray, fissile, with yellow medium-grained very glauconitic sand	. 23	312
Sand, grayish-yellow, medium- to very coarse- grained, very glauconitic	. 22	334
Sand, yellow, medium to coarse-grained, very glauconitic	. 23	357
Gordo formation:		
Sand, reddish-yellow, medium- to very coarse- grained, glauconitic, and varicolored, red, purple, gray, and yellow clay	. 23	380
Clay, varicolored, and reddish-yellow medium- to coarse-grained sand	. 23	403
Sand, brown, coarse- to very coarse-grained, with abundant chert and quartz pebbles, and some fragments of semi-indurated glauconitic sand and varicolored clay	. 23	426
Clay, varicolored, sandy, and brown medium - to very coarse-grained sand with some granules .	. 21	447

Table 3. -- Sample logs of wells in Autauga County, Ala. -- Continued

	Thickness (feet)	Depth (feet)
Well P-25Continued		
Gordo formationContinued		
Sand, brown, medium- to very coarse-grained, with some granules; a few fragments of varicolored clay; and some glauconite	. 23	470
Clay, gray, fissile with carbonaceous imprints; varicolored clay; and reddish-yellow medium-grained glauconitic sand	. 23	493
Sand, yellow, coarse-to very coarse-grained, with some granules, and varicolored clay	. 22	515
Sand, yellow, very coarse-grained, with granules and varicolored clay		561
No record	. 9	570
Well P-26 Owner: Autaugaville State Nurse Driller: Layne-Central Co.	ry	
Terrace deposits(?):		
Sand, yellowish-orange, medium-to coarse-grained, angular to subangular, clayey, ferruginous	. 22	22
Clay, moderate-reddish-orange, sandy, slightly micaceous	. 22	44
Sand, yellowish-orange, medium- to very coarse-grained, with some angular to subrounded ferru ginous granules and pebbles	-	66

Table 3. -- Sample logs of wells in Autauga County, Ala. -- Continued

	Thickness (feet)	Depth (feet)
Well P-26Continued		
Eutaw formation:		
Sand, yellowish-orange, medium- to coarse- grained, angular to subangular, clayey, glauconitic, ferruginous, slightly micaceous	. 22	88
Clay, dark-greenish-gray, sandy, micaceous, slightly glauconitic	. 22	110
Clay, greenish-gray to yellowish-orange, sandy, glauconitic, and grayish-yellow medium- to coarse-grained, angular to subangular glauconitic ferruginous sand	. 22	132
Clay, greenish-gray, sandy, slightly glauconitic and micaceous, and pale-yellowish-orange medium- to coarse-grained, angular to subangular slightly glauconitic ferruginous sand	. 22	154
Clay, yellowish-orange to brown, sandy, glauco- nitic, slightly micaceous, ferruginous, and yellowish-orange medium- to coarse-grained, angular to subangular slightly glauconitic ferruginous sand	. 22	176
Sand, grayish-orange, medium- to coarse-graine angular to subangular, very glauconitic, ferruginous, and yellowish-gray sandy micaceous glauconitic clay		198
Clay, gray, sandy, glauconitic, micaceous, and light-greenish-gray coarse-grained, angular to subangular glauconitic sand	. 23	221

Table 3. -- Sample logs of wells in Autauga County, Ala. -- Continued

	Thickness (feet)	Depth (feet)
Well P-26Continued		
Eutaw formationContinued	,	
Sand, greenish-gray, coarse-grained, angular to subangular, glauconitic, and yellowish-gray to gray sandy glauconitic calcareous slightly micaceous clay	. 23	244
Sand, yellowish-gray, medium-to coarse-grained angular to subangular, glauconitic, and olive-gray fissile sandy micaceous calcareous clay		267
Sand, yellowish-gray, coarse-to very coarse-grained, angular to subangular, slightly glauco-nitic, and olive-gray sandy micaceous clay		290
Sand, grayish-yellow, coarse-grained, angular to subangular, glauconitic, slightly ferruginous, and gray sandy slightly glauconitic clay	. 22	312
Sand, yellowish-orange, coarse-grained, angular to subangular, slightly glaucomitic, ferruginous	. 22	334
Sand, yellowish-orange, medium-to coarse- grained, angular to subangular, slightly glauco- nitic, ferruginous, and yellowish-gray sandy micaceous clay		357
Sand, very pale-yellowish-orange, medium-to coarse-grained, angular to subangular, slightly glauconitic; some manganese-coated(?) sand; grayish-yellow sandy clay	. 23	380
Sand, pale-yellowish-orange, medium- to coarse- grained, angular to subangular, slightly ferru- ginous, and grayish-yellow sandy clay		403

Table 3. -- Sample logs of wells in Autauga County, Ala. -- Continued

	Thickness (feet)	Depth (feet)
Well P-26Continued		
Gordo formation:		
Clay, dark-yellowish-orange to moderate-reddish-brown, sandy, slightly micaceous		426
Clay, pale-red-purple and moderate-reddish-brow sandy		448
Clay, moderate-reddish-brown, sandy, slightly micaceous	, 22	470
Clay, varicolored, sandy, and moderate-reddishorange coarse-grained, angular to subangular clayey ferruginous sand	, 22	492
Pebbles and granules, pale-yellowish-orange, sub- angular to rounded, quartzitic; pale-yellowish- orange very coarse-grained, subangular slightly ferruginous sand; yellowish-gray sandy clay		515
Sand, pale-yellowish-orange, coarse- to very coarse-grained, with some subangular slightly ferruginous granules, and yellowish-orange sandy clay	, 23	538
Sand, pale-yellowish-orange, coarse- to very coarse-grained, with some angular to sub-angular ferruginous granules and pebbles, and some varicolored sandy clay	, 46	584
Sand, very pale-orange, coarse- to very coarse- grained, angular to subangular, slightly ferruginous		607
Sand, dark-yellowish-orange, very coarse-grained with subangular very ferruginous granules and pebbles, and some varicolored sandy clay		629

Table 3. -- Sample logs of wells in Autauga County, Ala. -- Continued

	Thickness (feet)	Depth (feet)
Well P-26Continued		
Gordo formationContinued		
Sand, pale-yellowish-orange, medium-to coarse-grained, angular to subangular, clayey, ferruginous		654
Well Q-25 Owner: Alexander Oil Test No. Driller: Modern Drilling Co.	1	
Eutaw formation.		
Sand, yellowish-orange, medium- to coarse-grain angular to subangular, slightly glauconitic, ferr ginous; red limonitic clay; and light-gray slightly micaceous clay	·u- ly	24
Sand, yellowish-orange to reddish-brown, medium to coarse-grained, angular to subangular, glauconitic, very ferruginous		33
Sand, yellowish-orange, medium-to coarse-grained, angular to subangular, glauconitic, ferruginous	. 30	· 63
Sand, yellowish-orange, coarse-grained, angular to subangular, glauconitic, ferruginous, and light-gray slightly micaceous clay	. 30	93
Sand, pale-yellowish-orange, medium- to coarse-grained, angular to subangular, slightly glauconitic, ferruginous, and light-gray clay		124

Table 3. -- Sample logs of wells in Autauga County, Ala. -- Continued

	Thickness (feet)	Depth (feet)
Well Q-25Continued		
Eutaw formationContinued		
Sand, yellowish-orange, medium-grained, angular to subangular, slightly glauconitic and micaceous, ferruginous, and light-gray to reddish-brown micaceous clay	. 30	154
Sand, yellowish-orange, coarse-grained, angular to subangular, slightly glauconitic, ferruginous, and light-gray fissile slightly micaceous clay		184
Sand, very pale-yellowish-orange, medium- to coarse-grained, angular to subangular, slightly glauconitic and ferruginous, and gray glauconiti micaceous limonitic sandy clay	С	214
Sand, very pale-orange to white, medium- to coarse-grained, angular to subangular, slightly glauconitic, and light-gray sandy clay		245
Sand, pale-yellowish-orange, medium- to very coarse-grained, angular to subangular, clayey, ferruginous, slightly glauconitic	. 30	275
Clay, pale-red-purple, moderate-reddish-brown and dark-red, sandy; white calcareous sandston yellowish-orange medium- to very coarsegrained ferruginous sand		305
Sand, yellowish-orange, medium- to very coarse-grained, angular to subangular, clayey, ferruginous, slightly micaceous		334

Gordo formation:

Sand, pale-yellowish-orange, medium- to very

Table 3. -- Sample logs of wells in Autauga County, Ala. -- Continued

	Thickness	Depth
	(feet)	(feet)
Well Q-25Continued		
Gordo formationContinued		, *
coarse-grained, angular to subangular, clayey, slightly ferruginous, with some yellowish-orang subangular to subrounded granules		365
Sand, very pale-yellowish-orange, coarse- to ver coarse-grained, subangular, clayey, and some yellowish-orange subangular to subrounded quartz and chert granules	·	395
Sand, pale-yellowish-orange, coarse- to very coarse-grained, subangular, ferruginous; yellowish-orange subrounded ferruginous granules and pebbles; some varicolored sandy clay	. 61	456
Sand, very pale-orange, medium- to very coarse-grained, angular to subangular; some very pale orange subrounded granules; and some varicolos sandy clay	- red	486
Sand, very pale-yellowish-orange, medium- to ve coarse-grained, subangular, clayey, and yellow orange subrounded ferruginous granules	rish-	516
Sand, pale-yellowish-orange, coarse- to very coarse-grained, subangular, clayey, ferruginou and yellowish-orange subrounded to rounded ferruginous quartz and chert granules and pebbles		547
Clay, brown, pale-red-purple, and moderate- reddish-brown, sandy; very pale-orange mediun to very coarse-grained, angular to subangular clayey slightly ferruginous sand; some yellowish orange subrounded ferruginous granules	'n-	574

Table 3. -- Sample logs of wells in Autauga County, Ala. -- Continued

	Thickness (feet)	Depth (feet)
Well 2-25Continued		
Gordo formation Continued		
Clay, varicolored, sandy; light-gray micaceous clay; pale-yellowish-orange medium- to very coarse-grained, subangular slightly ferruginous sand; yellowish-orange subrounded quart and chert granules and pebbles		634
Coker formation(?):		
Clay, varicolored, sandy; light- to dark-gray pyritic micaceous slightly glauconitic clay	. 30	664
Clay, gray, sandy, micaceous, lignitic, pyritic; brown to red micaceous clay; very pale-orange medium- to coarse-grained, angular to sub-angular sand; some fossil fragments	. 30	694
Clay, gray, sandy, micaceous, lignitic, pyritic; very pale-orange medium- to very coarsegrained, angular to subangular sand; some foss fragments	0.0	724
Clay, light- to dark-gray, sandy, micaceous, slightly glauconitic and lightle, and some fossi fragments	0.4	755
Clay, gray, sandy, micaceous, lightic, pyritic; varicolored sandy clay; light-gray medium- to very coarse-grained, angular to subangular sand; white calcareous slightly micaceous sandstone	. 30	785
Clay, light-gray to brown, sandy, micaceous; light-gray to white medium- to very coarsegrained, with some granules, subangular quartzitic sand; some pyrite and lighte	. 31	816

Table 3. -- Sample logs of wells in Autauga County, Ala. -- Continued

	Thickness (feet)	Depth (feet)
Well 2-25Continued		
Coker formation(?)Continued		
Clay, gray to brown, sandy, micaceous, lignitic, pyritic, and white calcareous glauconitic micaceous sandstone	. 31	847
Clay, gray to brown, sandy, micaceous, lignitic; white coarse- to very coarse-grained, sub-angular sand; white to yellowish-orange sub-rounded quartz granules and pebbles	. 63	910
Clay, gray and brown, sandy, micaceous; white calcareous glauconitic micaceous sandstone; very pale-orange coarse- to very coarse- grained, subangular pyritic sand; yellowish- orange subrounded to rounded quartz granules and pebbles	. 59	9 39
Sandstone, dark-gray, pyritic; varicolored sandy micaceous clay; very pale-orange medium- to very coarse-grained, subangular sand; pale-orange subrounded quartz and chert granules and pebbles; some reworked fossil fragments		999
Clay, gray, fissile, micaceous; greenish-gray calcareous micaceous pyritic sandstone; some pale-orange subangular to subrounded quartz granules and pebbles	. 31	1,030
Clay, gray and varicolored, sandy, micaceous, pyritic, yellowish-orange subrounded quartz granules and pebbles	. 30	1,080

Table 3. -- Sample logs of wells in Autauga County, Ala. -- Continued

	Thickness (feet)	Depth (feet)
Well Q-25Continued		
Coker formation(?)Continued		
Sand, yellowish-orange, very coarse-grained, subangular, ferruginous; yellowish-orange subangular to subrounded quartz and arkose granules and pebbles; gray fissile micaceous sandy clay; varicolored micaceous sandy clay.	. 61	1, 121
Granules and pebbles, pale-yellowish-orange, angular to subrounded, quartzitic, and gray and brown sandy micaceous pyritic clay		1,152
Pebbles and granules, yellowish-orange, sub- angular to rounded, quartzitic, arkosic, and grayish-brown sandy micaceous pyritic clay	. 30	1,182
Pebbles and granules, yellowish-orange, sub- angular to subrounded, quartzitic, arkosic; gray and varicolored sandy micaceous pyritic clay; light-gray micaceous pyritic schist		1, 213
Pre-Cretaceous rocks(?):		
Granules and pebbles, pale-yellowish-orange, sub angular to rounded, quartzitic; gray fissile mica ceous clay; varicolored sandy micaceous clay.	a -	1,243
No record	. 13	1, 256

Table 3. -- Sample logs of wells in Autauga County, Ala. -- Continued

		ckness eet)	Depth (feet)
,	(1)	CC 67	(1000)
Well R-5 Owner: Prattville Memorial Gardens Driller: Alex Stoudenmire Well and Su	pply	Co.	
Terrace deposits:		,	1
Clay, moderate-reddish-brown, sandy, mica- ceous; dark-yellowish-orange medium- to very coarse-grained, angular to subangular ferru-			-
ginous sand, with some granules	•	20	20
Sand, yellowish-orange, coarse-to very coarse- grained with granules, subangular, ferruginous	ø	22	42
Sand, pale-yellowish-orange, coarse- to very coarse-grained with granules, angular to sub-rounded, ferruginous	0	21	63
Eutaw formation(?):			
Sand, pale-yellowish-orange, coarse- to very coarse-grained, angular to subangular, ferruginous, slightly micaceous	•	21	84
Sand, pale-yellowish-orange, medium- to very coarse-grained, angular to subangular, mica-ceous, ferruginous	o	21	105
Sand, yellowish-orange to light-reddish-brown, medium- to very coarse-grained, angular to subangular, micaceous, ferruginous, and some varicolored sandy micaceous clay	0	21	126
Gordo formation(?):		-	
Sand, pale-yellowish-orange, very coarse- grained, subangular, slightly ferruginous	0	21	147

Table 3. -- Sample logs of wells in Autauga County, Ala. -- Continued

	Thickness (feet)	Depth (feet)
Well R-5Continued		
Gordo formation(?)Continued		
Sand, very pale-yellowish-orange, coarse- to very coarse-grained, angular to subangular, slightly ferruginous	. 7	154
Well R-11 Owner: Prattville Ice and Coal Coal Coal Coal Coal Coal Coal Coal	o.	
No record	. 144	144
Sand, pale-yellowish-orange, medium- to very coarse-grained, angular to subangular, ferruginous, and varicolored sandy lignitic clay	21	165
Sand, pale-yellowish-orange, coarse- to very coarse-grained, subangular, slightly ferruginous, and varicolored sandy clay	. 21	186
Sand, pale-yellowish-orange, coarse- to very coarse-grained, subangular, slightly ferruginous	. 21	207
Sand, very pale-orange, coarse-to very coarse-grained, subangular, slightly ferruginous	. 11	218

Table 3. -- Sample logs of wells in Autauga County, Ala. -- Continued

	Thickness (feet)	Depth (feet)
Well Mtg. TW-109 (Samples described by H. L. Reade, Owner: City of Montgomery Driller: Layne-Central Co.	,Jr.)	, " , "
Mooreville chalk:	'	,
Sand, dark-yellowish-orange and light-greenish-gray, medium- to coarse-grained, angular to subangular, micaceous, glauconitic, fossil-iferous, and yellow clay	. 10	10
Eutaw formation:		
Clay, greenish-gray, micaceous, and light-greenish-gray medium-grained, angular to subangular glauconitic sand	. 12	22
Sand, light-greenish-gray, medium-grained, angular to subangular, pyritic, glauconitic, and greenish-gray micaceous fossiliferous clay	. 10	32
Sand, light-greenish-gray, medium-grained, angular to subangular, pyritic, glauconitic, and white sandy limestone	. 14	46
Sand, light-greenish-gray, medium-grained, angular to subangular, pyritic, glauconitic	. 10	56
Sand, light-greenish-gray, medium- to coarse- grained, angular to subangular, pyritic, glauco- nitic, and greenish-gray micaceous clay		80
Sand, light-greenish-gray, medium-grained, angular to subangular, glauconitic, and greenish-gray micaceous clay. Contains fragments of sandy limestone	. 60	140

Table 3. -- Sample logs of wells in Autauga County, Ala. -- Continued

	Thickness (feet)	Depth (feet)
Well Mtg. TW-109Continued		
Eutaw formationContinued		
Sand, light-greenish-gray, medium- to coarse- grained, angular to subangular, pyritic, glauconitic; greenish-gray micaceous clay;	9.9	170
limonitic concretions	. 32	172
Sand, light-greenish-gray, fine- to medium- grained, subangular to subrounded, glauconitic, and greenish-gray micaceous clay	. 13	185
Sand, light-greenish-gray, medium-grained, angular to subangular, glauconitic, and greenish-gray micaceous clay		195
Sand, light-greenish-gray, medium- to coarse- grained, angular to subangular, pyritic, glauco- nitic, and small amount of gray clay		219
Sand, light-greenish-gray, medium-to coarse-grained, angular to subangular, glauconitic, and greenish-gray micaceous clay		233
Sand, light-greenish-gray, fine- to medium- grained, angular to subangular, glauconitic, and greenish-gray micaceous clay	- 4	267
Sand, light-greenish-gray, medium-grained, angular to subangular, pyritic, glauconitic, fossiliferous. Contains fragments of limestone	. 22	289
Sand, light-greenish-gray, fine- to medium- grained, angular to subangular, glauconitic, fossiliferous, and greenish-gray micaceous	1.9	302
clay	. 13	002

Table 3. -- Sample logs of wells in Autauga County, Ala. -- Continued

	Thickness (feet)	Depth (feet)
Well Mtg. TW-109Continued		
Eutaw formationContinued		= "
Sand, light-greenish-gray, medium- to coarsegrained, angular to subangular, glauconitic, fossiliferous, and greenish-gray micaceous clay	. 24	326
Gordo formation:		
Clay, dark-reddish-brown and light-greenish-gray micaceous, and pinkish-gray medium-grained, angular to subrounded pyritic glauconitic fossili erous sand	f- . 10	346
Sand, very pale-orange, coarse- to very coarse- grained, angular to subangular, slightly glauco- nitic, and moderate-reddish-brown, pale-green and dark-yellowish-orange clay Sand, very pale-orange, medium- to coarse-	,	356
grained, angular to subangular, slightly glauco- nitic, and dark-yellowish-orange, moderate- reddish-brown, and pale-green clay		372
Sand, very pale-yellowish-orange, fine- to medium grained, angular to subangular, and moderate-reddish-brown, pale-green, and pale-red-purple-	e e	
clay	. 10	382

Table 3. -- Sample logs of wells in Autauga County, Ala. -- Continued

	Thickness (feet)	Depth (feet)
Well Mtg. TW-109Continued		
Gordo formationContinued		
Sand, yellowish-gray, medium- to very coarse-grained, angular to subangular, and moderate-reddish-brown, pale-green, and pale-red-purple clay		395
Sand, very pale-yellowish-orange, medium- to coarse-grained, angular to subangular	. 10	405
Sand, very pale-orange, medium- to very coarse- grained, angular to subangular, pyritic, and small amount of varicolored clay		418
Sand, very pale-yellowish-orange, medium-graine angular to subangular, and moderate-reddish-brown, pale-green, and pale-red-purple clay		428
Sand, very pale-yellowish-orange, medium- to coarse-grained, angular to subangular, pyritic	. 13	441
Sand, grayish-orange, medium- to coarse-grained angular to subangular, and moderate-reddish-brown, pale-green, pale-red-purple, and yellowish-brown clay		451
Sand, grayish-orange, medium- to very coarse- grained, angular to subangular, and varicolored clay	4 ==	498
Sand, pale-yellowish-orange, medium- to very coarse-grained, angular to subangular	. 23	521
Sand, pale-yellowish-orange, medium- to very coarse-grained, angular to subangular; yellow to reddish-yellow quartzitic cherty gravel; and moderate-reddish-brown, pale-green, and pale-red-purple clay	4 =	536

Table 3. -- Sample logs of wells in Autauga County, Ala. -- Continued

	Thickness (feet)	Depth (feet)
Well Mtg. TW-109Continued		
Gordo formationContinued		_1. ≯ε.
Sand, very pale-orange, fine- to medium-grained, angular to subangular, and greenish-gray, moderate-reddish-brown, and pale-red-purple	(a =	
clay	. 10	54 6
Sand, very pale-yellowish-orange, medium- to coarse-grained, angular to subangular, glauconitic, and pale-green, grayish-red-purple, and		-
moderate-reddish-brown micaceous clay	. 37	583
Sand, very pale-yellowish-orange to white, fine- to medium-grained, angular to subangular, glauconitic, and pale-green, moderate-reddish- brown, and moderate-yellowish-brown mica- ceous clay		607
Coker formation:		
Sand, yellowish-gray, fine- to coarse-grained, angular to subangular, glauconitic, and pale-green, grayish-red-purple, and moderate-reddish-brown micaceous clay	. 66	673
Clay, greenish-gray and pale-green to varicolored micaceous, and yellowish-gray fine- to medium grained, angular sand	-	710
Sand, white, medium-grained, angular to sub-angular	. 13	723
Sand, white, medium-grained, angular to sub- angular, pyritic, and pale-green and pale- purple to varicolored micaceous clay	. 10	733

Table 3. -- Sample logs of wells in Autauga County, Ala. -- Continued

	Thickness (feet)	Depth (feet)
Well Mtg. TW-109Continued		
Coker formationContinued		
Clay, greenish-gray, micaceous, lignitic, and light-greenish-gray fine- to medium-grained, angular to subangular pyritic lignitic sand	. 46	779
Sand, light-greenish-gray, fine- to medium-grain angular, lignitic, pyritic, and greenish-gray micaceous lignitic clay		793
Clay, greenish-gray and pale-green, micaceous, lignitic, and light-greenish-gray fine- to mediugrained, angular pyritic lignitic fossiliferous sand		841
Sand, light-greenish-gray, fine- to medium- grained, angular to subangular, pyritic, fossiliferous; greenish-gray and pale-green micaceous clay; and white sandy limestone	. 10	851
Sand, light-greenish-gray, fine- to medium- grained, angular to subangular, glauconitic, pyritic, lignitic, fossiliferous; light-greenish- gray micaceous clay; and white sandy limestone	. 24	875
Sand, light-greenish-gray, medium-grained, angular, pyritic, glauconitic	. 13	888
Sand, light-greenish-gray, fine- to medium- grained, angular, glauconitic, and pale-red- purple, greenish-gray, pale-green, and modera yellowish-brown micaceous clay		898

Table 3. -- Sample logs of wells in Autauga County, Ala. -- Continued

	Thicknes (feet)	•
Well Mtg. TW-109Continued		
Coker formationContinued		and the second
Sand, white, medium- to coarse-grained, angular to subangular, pyritic, glauconitic, and greenish-gray, moderate-reddish-brown, and	- 10 11	14 9 24 4
pale-green micaceous fissile clay	. 13	911
Sand, white, medium- to very coarse-grained, angular to subrounded, and yellow and grayish-		
brown clay	. 10	. 921
Sand, light-greenish-gray, fine- to medium- grained, angular to subangular, pyritic, fossilif erous, and greenish-gray micaceous clay.		0.24
Contains pyritized wood fragments	. 13	934
Sand, white, medium - to coarse-grained, angular to subangular, pyritic, glauconitic, and greenish gray, moderate-reddish-brown, pale-green, and pale-red-purple micaceous clay	d	, 958
Clay, greenish-gray, micaceous, fissile, and white medium - to coarse-grained, angular to subangular pyritic glauconitic sand		989
Shale, greenish-gray, micaceous, fissile, and white fine- to medium-grained, angular to subangular biotitic pyritic sand	. 13	1,002
Shale, greenish-gray and pale-green, micaceous, fissile; varicolored clay; and very pale-orange medium-to coarse-grained, angular to sub-		7
angular pyritic glauconitic sand	. 10	1,012

Table 3. -- Sample logs of wells in Autauga County, Ala. -- Continued

		kness eet)	Depth (feet)
Well Mtg. TW-109Continued			
Coker formationContinued			
Sand, very pale-yellowish-orange, coarse-graine angular to subangular, and moderate-reddishbrown, pale-green, and greenish-gray micaceo			
fissile clay	ø	14	1,026
Sand, very pale-orange, fine- to medium-grained angular to subangular, pyritic, glauconitic,	· y		
and varicolored clay	ø	10	1,036
Sand, yellowish-gray to very pale-orange, medius grained, angular to subangular, pyritic, limoni glauconitic, and greenish-gray, pale-red-purple moderate-reddish-brown, and light-green mica ceous fissile sandy clay	tic, e,	24	1,060
			·
Sand, very pale-orange, medium-grained, angula to subangular		13	1,073
Clay, greenish-gray, pale-green, moderate- reddish-brown, and pale-red-purple, sandy, micaceous, fissile, and white medium-grained, angular quartzitic pyritic glauconitic sand		10	1,083
			·
Sand, very pale-orange, medium- to coarse- grained, angular to subangular, and vari- colored clay	o	65	1,148
Sandstone, very pale-yellowish-orange, medium- to coarse-grained, angular, hard		5	1, 153
Sand, very pale-yellowish-orange, medium- grained, angular to subangular, and greenish-			
gray, moderate-reddish-brown, and pale-red- purple micaceous fissile clay	g	24	1,177

Table 3. -- Sample logs of wells in Autauga County, Ala. -- Continued

	Thickness (feet)	Depth (feet)
Well Mtg. TW-109Continued		
Coker formationContinued		3
Sand, very pale-yellowish-orange, medium- to coarse-grained, angular to subangular, and greenish-gray, moderate-reddish-brown, and pale-red-purple micaceous clay	. 38	1, 215
Pre-Cretaceous rocks:		,
Sand, very pale-orange, medium- to very coarse-grained, angular; varicolored clay; and biotitic schistose fragments		1, 219
Well Mtg. TW-112 (Samples described by H. L. Reade, Owner: City of Montgomery Driller: Layne-Central Co.	Jr.)	,
Terrace deposits:		
Clay, dark-yellowish-orange	. 10	_ 10
Sand, pale-yellowish-orange, coarse- to very coarse-grained, angular, micaceous, and fine to coarse quartzitic gravel	. 22	32
Sand, light-brown, very coarse-grained, angular to subangular, micaceous, and fine subrounded quartzitic gravel	. 10	42

Table 3. -- Sample logs of wells in Autauga County, Ala. -- Continued

Thickness (feet)		Depth (feet)
Well Mtg. TW-112Continued		
Eutaw formation:		
Sand, grayish-orange, medium-to coarse-grained, angular to subangular, micaceous, and greenish-gray clay	. 13	55
Sand, pale-yellowish-orange, medium- to coarse- grained, angular to subangular, ferruginous, micaceous, and greenish-gray micaceous clay.		69
Sand, light-greenish-gray, medium- to coarse-grained, angular to subangular, micaceous, and greenish-gray micaceous clay		91
Sand, light-greenish-gray, fine- to coarse-graine angular to subangular, glauconitic, micaceous, and greenish-gray micaceous clay		101
Sand, light-greenish-gray, coarse- to medium- grained, subangular to subrounded, slightly frosted, slightly glauconitic, micaceous	. 13	114
Sand, light-greenish-gray, coarse- to medium-grained, angular to subrounded, slightly frosted slightly glauconitic, micaceous, and greenish-gray micaceous clay		124
Sand, light-greenish-gray, medium- to coarse-grained, angular to subangular, slightly frosted glauconitic, micaceous, and greenish-gray micaceous clay	a	161
Sand, light-greenish-gray, medium-grained, angular to subangular, glauconitic, micaceous, and greenish-gray clay		184

Table 3. -- Sample logs of wells in Autauga County, Ala. -- Continued

	T	hickness	Depth
		(feet)	(feet)
Well Mtg. TW-112Continued			
Eutaw formationContinued			t.
Sand, light-greenish-gray, fine- to medium- grained, angular, micaceous, lignitic, and			
greenish-gray micaceous fissile clay	•	10	194
Gordo formation:		,	
Clay, greenish-gray, micaceous, varicolored clay and light-greenish-gray medium- to fine-graine angular to subangular glauconitic micaceous			
sand	•	13	207
Clay, varicolored, and light-greenish-gray fine-grained, angular glauconitic sand	0	10	217
Sand, very pale-yellowish-orange, medium- to coarse-grained, angular to subangular, ferruginous, and varicolored clay	,	38	255
Sand, pale-yellowish-orange, medium-to coarse-grained, angular to subangular, ferruginous; varicolored clay; and greenish-gray micaceous clay		10	295
Sand, very pale-yellowish-orange, medium-to coarse-grained, angular to subangular, ferruginous, and varicolored clay	o	14	279
Sand, pale-yellowish-orange, medium- to coarse- grained, angular to subangular, ferruginous, slightly micaceous, and greenish-gray, pale- green, pale-red-purple, and moderate-red			
micaceous clay	v	23	302

Table 3. -- Sample logs of wells in Autauga County, Ala. -- Continued

	Thickness	Depth
	(feet)	(feet)
Well Mtg. TW-112Continued		
Gordo formationContinued		
Sand, very pale-yellowish-orange, medium-graine angular to subangular, ferruginous, and varicolored clay		312
Sand, pale-yellowish-orange, fine- to coarse- grained, angular to subangular, ferruginous, an pale-red-purple, pale-green, moderate-reddish brown, and greenish-gray micaceous clay	1-	324
Sand, pale-yellowish-orange, fine- to medium- grained, angular to subangular, ferruginous, pyritic, micaceous, and very pale-green, pale- red-purple, moderate-reddish-brown, brownish yellow, and greenish-gray micaceous clay		371
Sand, very pale-orange, medium- to coarse- grained, angular to subangular, ferruginous, micaceous, and greenish-gray to varicolored glauconitic clay	. 10	381
Sand, very pale-orange, medium- to coarse- grained, angular, ferruginous, micaceous, and moderate-reddish-brown, pale-red-purple, pale green, and greenish-gray micaceous clay		394
Sand, pale-yellowish-orange, medium- to coarse-grained, angular to subangular, ferruginous, an varicolored clay	ıd	404
Sand, very pale-orange, medium- to coarse- grained, angular to subangular, ferruginous	. 14	418

Table 3. -- Sample logs of wells in Autauga County, Ala. -- Continued

		ckness	Depth
	(1	Geet)	(feet)
Well Mtg. TW-112Continued			
Gordo formationContinued			
Sand, very pale-yellowish-orange, fine- to mediur grained, angular to subangular, ferruginous, moreous, and greenish-gray to varicolored micace clay	ica - ous	10	428
Sand, white, medium-to coarse-grained, angular to subangular, ferruginous, slightly micaceous, and varicolored clay	٥	14	442
Sand, white, medium-to coarse-grained, angular to subangular, and varicolored clay	• •	10	452
Sand, very pale-orange, medium- to coarse-grain angular to subangular, ferruginous, and pale-green, moderate-reddish-brown, and pale-red-purple sandy clay		37	489
Sand, very pale-orange, medium-to coarse- grained, angular to subangular, ferruginous, pyritic, micaceous, glauconitic, slightly lignitic and greenish-gray micaceous lignitic clay		10	499
Sand, very pale-orange to white, fine- to coarse- grained, angular to subangular, micaceous, pyritic, slightly glauconitic, lignitic, and greenish-gray micaceous lignitic clay	o	14	513
Sand, light-greenish-gray, fine-grained, angular, micaceous, pyritic, lignitic, and greenish-gray, pale-green, pale-red-purple, and moderate-reddish-brown sandy micaceous clay		25	538

Table 4. -- Drillers' logs of wells in Autauga County, Ala.

	Thickness (feet)	Depth (feet)
Well D-11 Owner: Southern Railroad Driller: Brady Drilling Co.		
Topsoil	. 84 . 100 . 10 . 10 . 15 . 10	8 16 100 200 210 220 235 245 320 353
Well H-6* Owner: Ruth M. Fleenor Driller: H. W. Peerson Well Co).	
Clay, sandy	. 4 . 21 . 21 . 20 . 10 . 10	15 19 40 61 81 91 101 121

^{*}Note: Log of well drilled at site and abandoned.

Table 4. -- Drillers' logs of wells in Autauga County, Ala. -- Continued

Well P-25	pth eet)
Well P-25	eet)
Owner: Autaugaville State Nursery	
Driller: Layne-Central Co.	
Sand and gravel	40
8	60
Sand and gravel	70
Clay, hard 12	82
Clay, sandy	92
Rock	93
* SCV *** *** *** *** *** *** *** *** *** *	12
	29
	56
	66
Clay	187
Sand, packed 9	96
Clay	198
Sand, packed 9	207
Sand, draggy 4	211
Sand, packed 20	231
Clay 7	238
Clay, sandy	862
	282
	285
	290
	298
	320
	322
	367
	170
	95
	10
	550
	555
	59
	70

Table 4. -- Drillers' logs of wells in Autauga County, Ala. -- Continued

	Thickness	~
	(feet)	(feet)
Well P-26		
Owner: Autaugaville State Nurse:	rv	
Driller: Layne-Central Co.	- 3	
De name e .		
Sand, red, and clay	. 12	12
Sand		21
Clay		35
Sand		44
Clay, sandy		88
Clay, blue		120
Sand, muddy		130
Clay		142
Sand, muddy		151
Clay		160
Sand and streaks of clay		202
Clay		213
Sand		227
Clay		231
Sand		233
Sand and streaks of clay		269
Shale, sandy		291
Sand and streaks of clay		337
Sand, yellow		344
Clay, sandy, yellow and blue		358
Sand, yellow, hard, and clay		380
Sand, yellow	~ ~	402
Clay	0.0	485
Clay, sandy		496
Sand, packed	4 45	514
Clay		522
Sand, packed; clay beds in upper 8 feet		538
Sand, packed, and gravel		584
Sand, packed		599
Clay		601
Sand, streaks of clay	_	608
Sand, packed		618
Clay, red, and sand		654

Table 4. -- Drillers' logs of wells in Autauga County, Ala. -- Continued

	Thickness	Depth
	(feet)	(feet)
Well Q-25		
Owner: Alexander Oil Test No.	1	
Driller: Modern Drilling Co.		
Clay, red	. 28	28
Sand, brown		73
Clay		75
Sand, brown		100
Clay	. 5	105
Sand, brown		169
Clay		174
Sand, streaks clay		304
Rock	. 1	305
Sand, streaks clay	. 10	315
Clay, streaks packed sand	. 5	320
Clay, hard	. 70	390
Sand	. 30	420
Clay	. 4	424
Sand and gravel	. 87	511
Clay	4.	515
Sand and gravel	. 57	572
Clay	. 6	578
Sand	. 162	740
Marl, blue	. 31	771
Rock	. 1	772
Clay, sandy	. 18	790
Clay and boulders	. 170	960
Rock	. 3	963
Shale, streaks sand	. 252	1, 215
Gumbo	. 31	1, 246
Rock		1, 256

Table 4. -- Drillers' logs of wells in Autauga County, Ala. -- Continued

	Thickness (feet)	Depth (feet)
Well R-5 Owner: Prattville Memorial Gardens Driller: Alex Stoudenmire Well and Su	pply Co.	
Soil, gravel, and clay	43212112	20 63 84 105 126 138 154
Well R-11 Owner: Prattville Ice and Coal C Driller: Acme Drilling Co.	lo.	
Cinders	 . 11 . 13 . 32 . 21 . 17 . 12 . 20 . 3 . 12 . 4 . 2 . 3 . 14 . 2 	4 15 28 60 81 98 110 130 133 145 149 151 154 168 170 218

Table 4. -- Drillers' logs of wells in Autauga County, Ala. -- Continued

	Thickness (feet)	Depth (feet)
Well R-15 Owner: Prattville Elementary Sch Driller: I. E. Sarber	nool	
Sand	. 60	30 90 99
Well R-27* Owner: Sunset Trailer Park Driller: Acme Drilling Co.	***	
Sand, red, and gravel	. 35 . 20 . 25	20 85 105 130 155
*Note: Log of well drilled at site and abandoned.		
Well R-38 Owner: City of Prattville Driller: Layne-Central Co.		
Sand and gravel	. 5 . 14 . 49 . 18 . 26 . 5	24 30 44 93 111 137 142 149 160

Table 4. -- Drillers' logs of wells in Autauga County, Ala. -- Continued

	Thickness (feet)	Depth (feet)
Well R-38Continued		
Clay, sand, and gravel	 31 4 54 13 19 42 15 	220 251 255 309 322 341 383 398 443
Well R-40 Owner: City of Prattville Driller: Layne-Central Co.		

Sand and gravel	13
Clay, sandy	27
Clay and sandstone	81
Sand	108
Clay and hard sandstone	126
Sand, muddy 9	135
Sandstone and clay	150
Sand	173
Sandstone	176
Sand	212
Sand, hard	245
Sand, very hard	280
Clay, some sand	317
Sand	338
Sandy clay	356
Sand, streaks clay	386
Soapstone, hard	421
Sand, very hard	442
Clay: some fine sand	486

Table 4. --Drillers' logs of wells in Autauga County, Ala. --Continued

	Thickness	Depth
	(feet)	(feet)
Well T-1* Owner: Wadsworth Plantation		
Clay, red	. 19	19
Gravel	. 22	41
No record	. 42	83
Sandstone	. 2	85
Sand, fine	. 22	107
No record	. 37	144
Sand, fine	. 10	154
No record	. 106	260
Rock	. 1	261
No record	. 29	290
Sand	. 6	296
No record	. 139	435
Sand, yellow, coarse	. 5	440
Clay, ocher, red, and yellow		474
Sand		475

^{*}Note: Log of well drilled at site in 1905; well abandoned in 1950.

Well Mtg. TW-109

Owner: City of Montgomery Driller: Layne-Central Co.

Clay, sandy	7	7
Chalk and shells	3	10
Clay, blue, with streaks of sand	5	15
Clay, blue	17	32
Sand	3	35
Rock	1	36
Clay, hard	3	39
Sand	6	45
Clay, sandy, with streaks of sand	20	65
Sand	8	73
Rock	1	74
Clay, sandy, with streaks of sand	11	85

Table 4. -- Drillers' logs of wells in Autauga County, Ala. -- Continued

	Thickness (feet)	Depth (feet)
Well Mtg. TW-109Continued		
Rock	. 1	86
Clay, sandy	. 4	90
Sand, with streaks of clay		101
Sand, hard, packed	_	103
Rock		104
Sand, hard, packed		108
Rock		109
Clay, sandy, with streaks of sand		122
Rock		123
Clay, with streaks of sand		143
Rock		145
Clay, with thin streaks of sand		154
Sand		160
Clay		170
Sand, with thin streaks of clay		183
Clay		200
Sand, hard, packed		211
Clay		213
Sand, hard, packed		216
Clay, sandy, with streaks of sand		238
Sand, hard, packed		249
Sand, hard, packed, with streaks of clay		255
Sand, hard, packed		231
Rock, soft.	-	283
Clay, sandy		286
Rock		288
Clay, sandy, with streaks of sand		312
Clay, hard		377
Sand		386
Clay	1.5	401
Sand	4	405
Clay	-	417
·		427
	. 10	J. 6d 1
Sand		436

Table 4. -- Drillers' logs of wells in Autauga County, Ala. -- Continued

	Thickness	Donth
	(feet)	Depth (feet)
	(1001)	(1000)
Well Mtg. TW-109Continued		
Clay	. 7	450
Sand, hard, packed	. 10	460
Clay	. 2	462
Sand	. 2	464
Sand, hard, packed		475
Clay, hard	. 5	480
Sand, with streaks of clay	. 2	482
Sand, hard, packed	. 7	489
Clay	. 2	491
Sand, hard, packed		521
Clay		564
Sand, hard, packed		569
Clay		588
Sand, with streaks of clay		613
Clay, hard		633
Sand		637
Clay, hard		657
Sand		661
Clay, hard	. 7	668
Clay, sandy		672
Clay, hard		693
Sand, fine-grained, packed		700
Clay, sandy		712
Sand, hard, packed		727
Clay, with streaks of sand		795
Rock		797
Clay, with streaks of sand		807
Clay, blue		822
Rock		823
Clay		825
Rock		827
Clay, with streaks of sand		839
Rock		840
Clay sandy with streets of sand		869
Clay, sandy, with streaks of sand		895
Sand		902

Table 4. -- Drillers' logs of wells in Autauga County, Ala. -- Continued

	Thickness (feet)	Depth (feet)
Well Mtg. TW-109Continued		
Shale, hard, with streaks of sand and clay Sand, hard, packed	. 10 . 60 . 4 . 21 . 28 . 18 . 1 . 7 . 7 . 7 . 5 . 6 . 21 . 20	1,007 1,017 1,077 1,081 1,102 1,130 1,148 1,149 1,156 1,163 1,168 1,174 1,195 1,215 1,217 1,219
Well Mtg. TW-112 Owner: City of Montgomery Driller: Layne-Central Co. Soil	. 11 . 3 . 13	2 13 16 29 51

Clay, with streaks of sand...........

Clay, sandy.....

Sand.....

Clay....

Sand.....

Clay, sandy......

Sand, hard-packed, with streaks of clay......

Table 4. --Drillers' logs of wells in Autauga County, Ala. --Continued

	Thickness	Depth
	(feet)	(feet)
Well Mtg. TW-112Continued		
Clay, hard, with streaks of sand	. 20	160
Sand, hard-packed, with streaks of clay		180
Clay		186
Sand, hard, packed		193
Clay		195
Sand		196
Clay, varicolored, hard		215
Clay, sandy		222
Sand, white, hard, packed		229
Clay		233
Sand, hard, packed		238
Clay, sandy		241
Sand, hard, packed, with thin streaks of clay		248
Clay, sandy		256
Sand, hard, packed, with thin streaks of clay		271
Clay		275
Sand, hard, packed		280
Clay, sandy	. 4	284
Sand, hard, packed, with streaks of clay		302
Sand, hard, packed		310
Clay		314
Clay, with streaks of sand		325
Clay, hard		331
Clay, sandy		337
Clay, varicolored, hard		368
Sand, hard, packed		375
Clay		378
Sand, with streaks of clay		382
Clay	. 8	390
Sand, with streaks of clay		398
Sand, hard, packed		419
Clay		427
Sand	. 5	432
Sand, hard, packed		458
Clay, hard, with streaks of sand		495
Clay, hard, with streaks of lignite		538



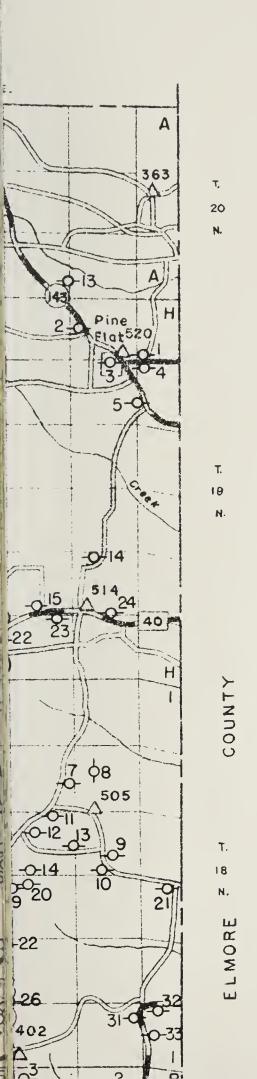


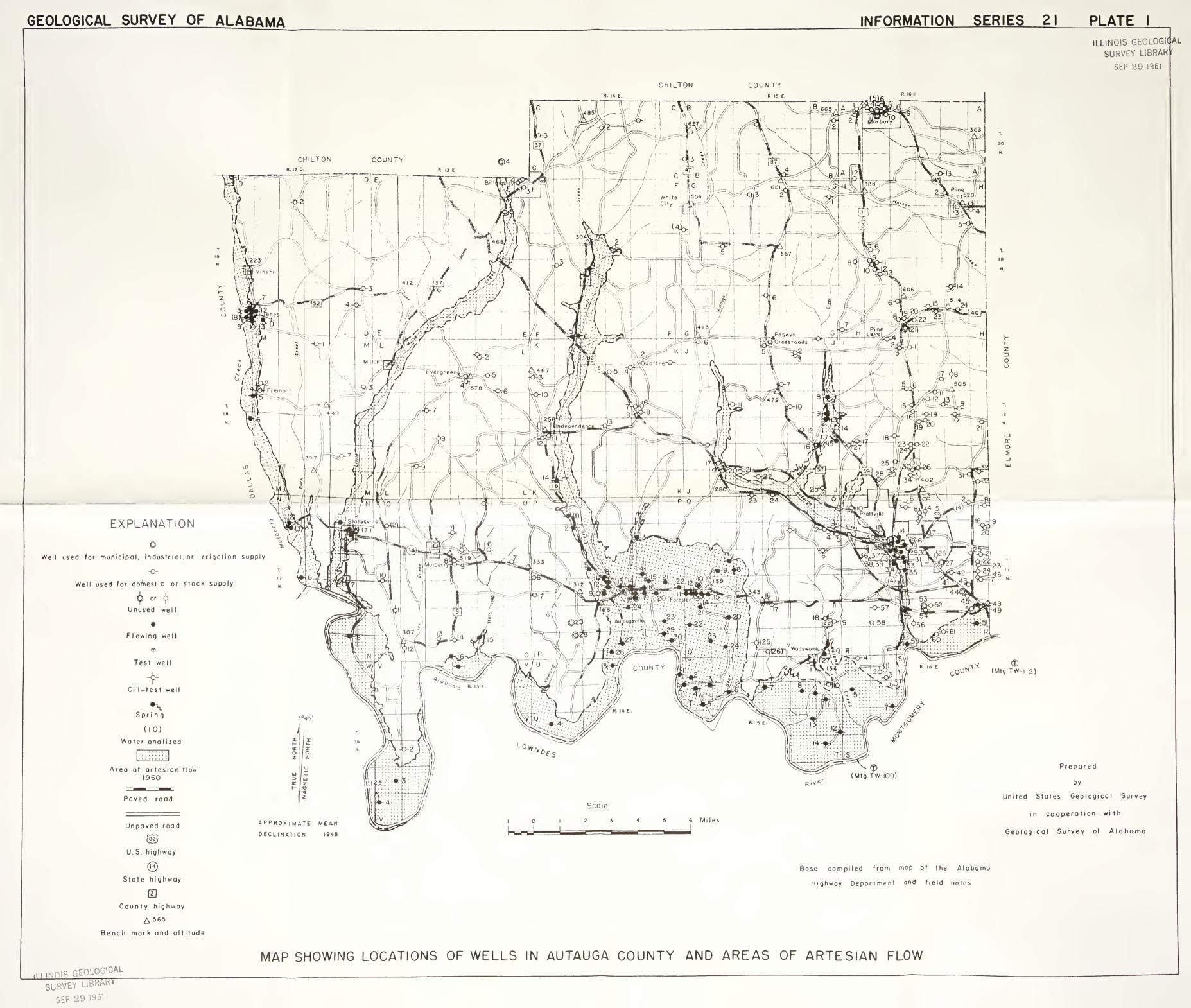
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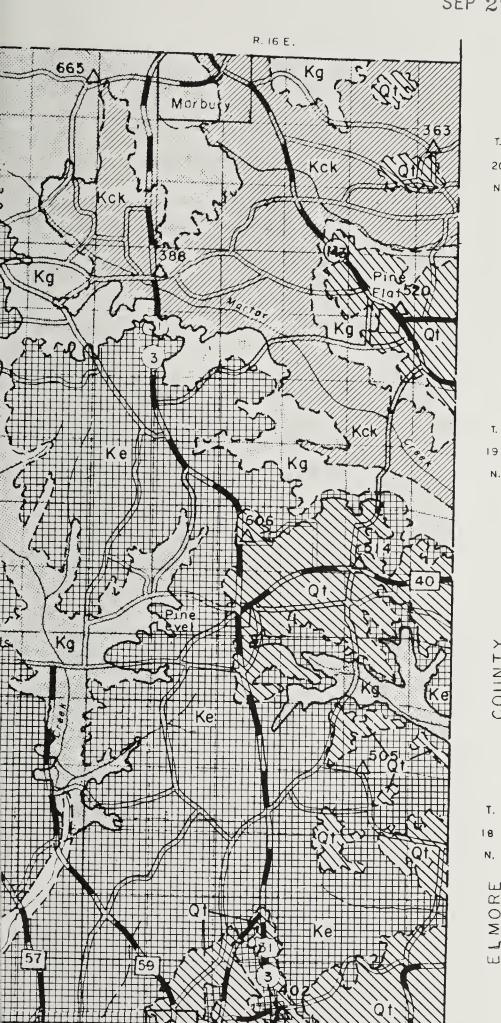
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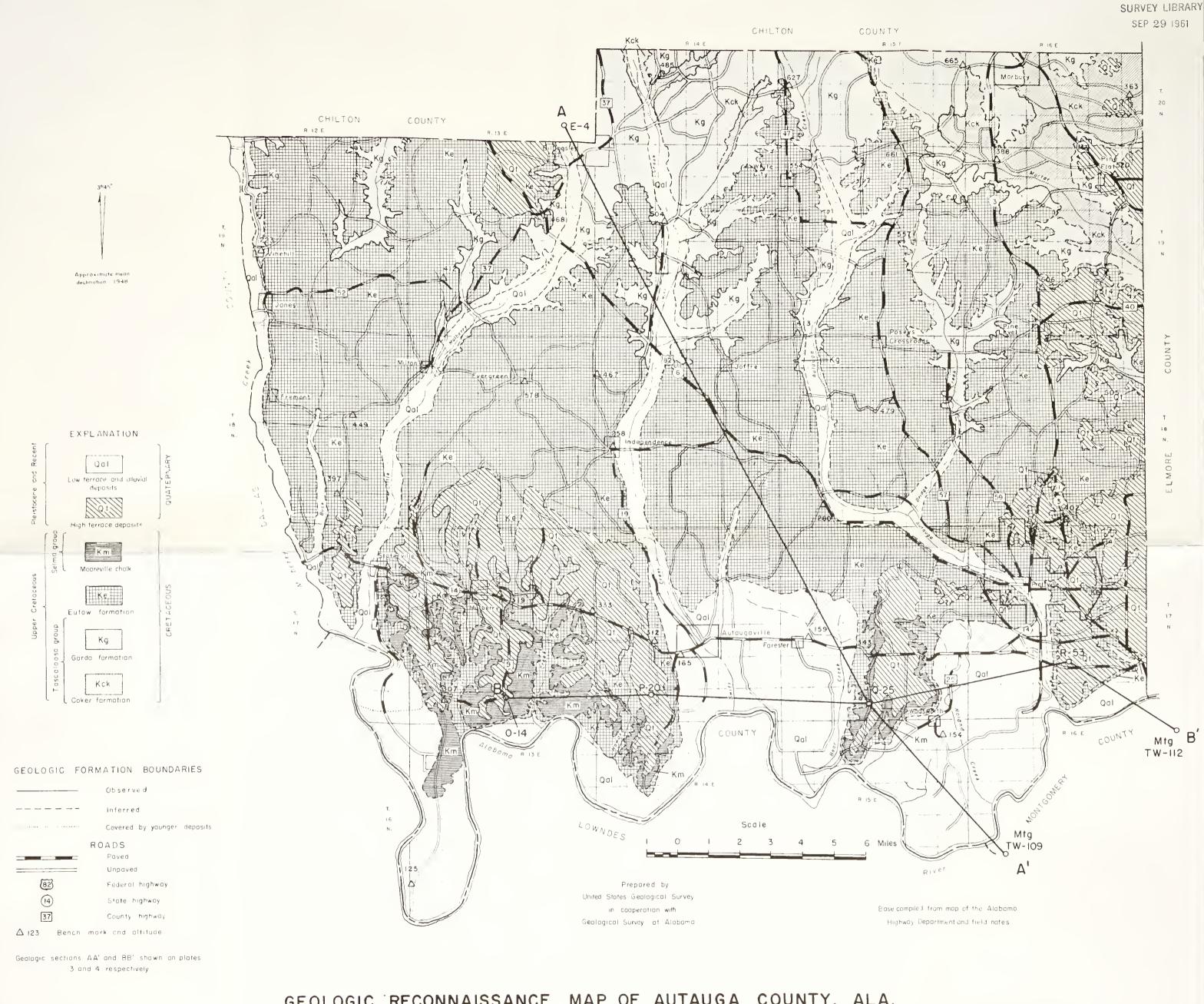


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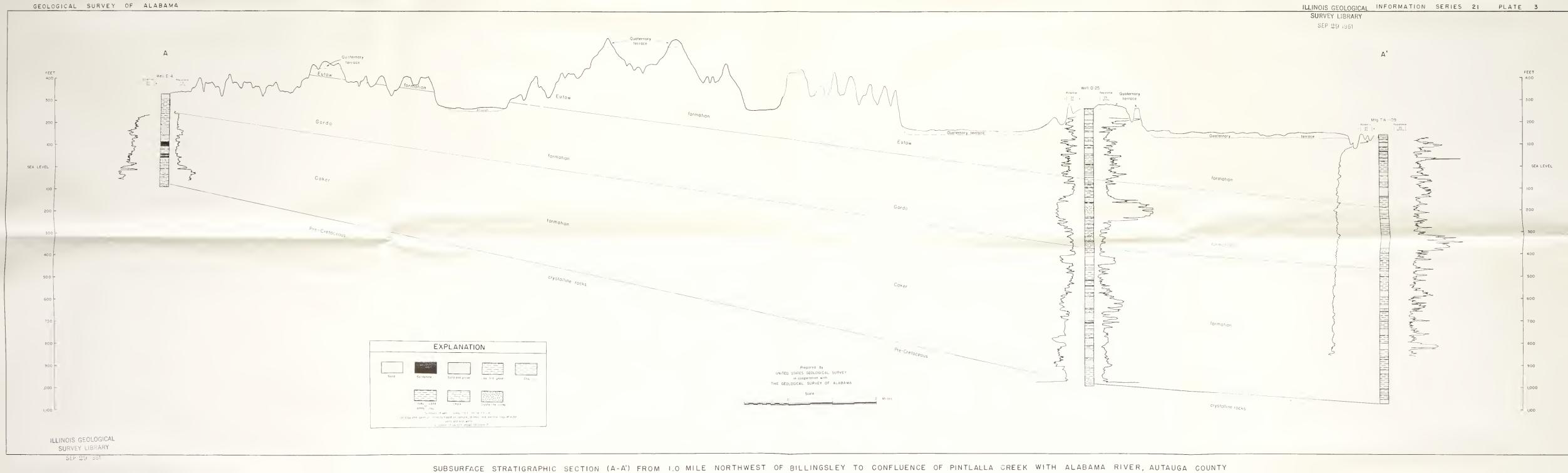
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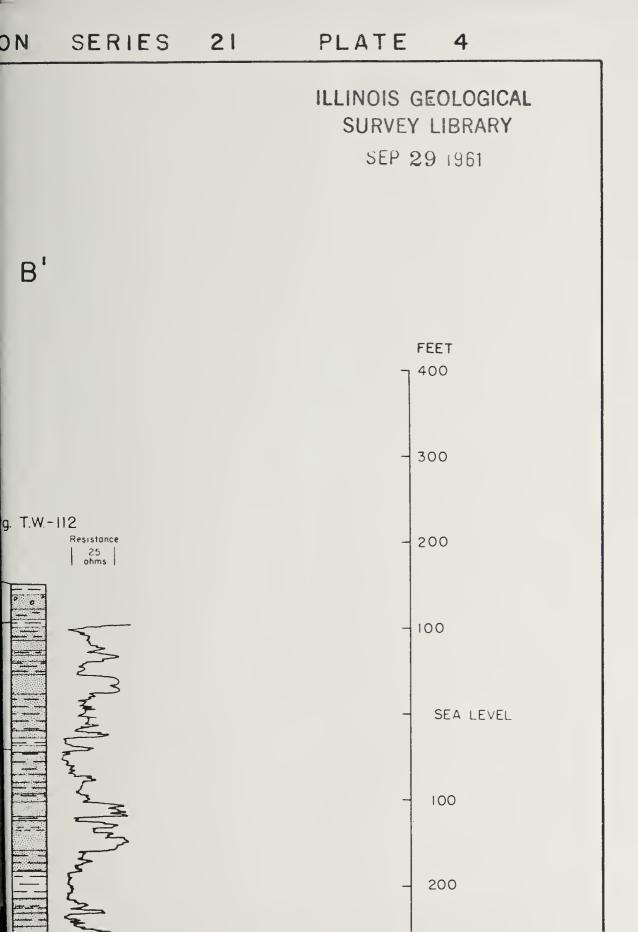


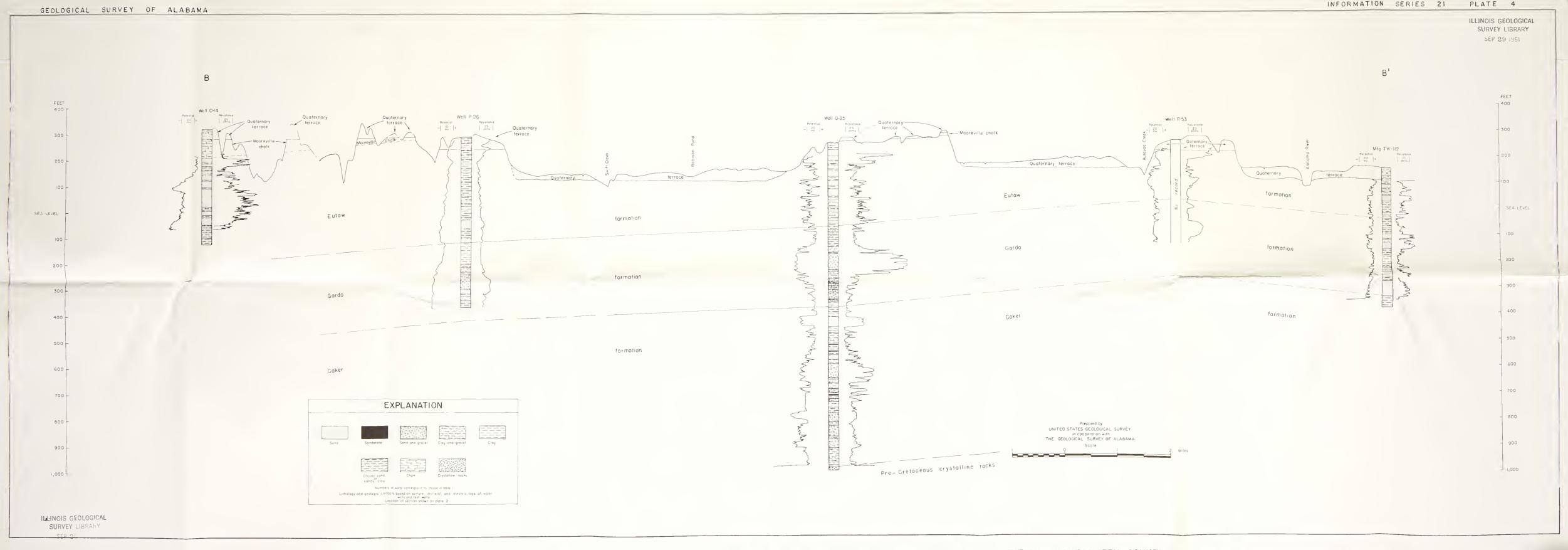
GEOLOGIC RECONNAISSANCE MAP OF AUTAUGA COUNTY, ALA.

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Jahn C Scatt and John G Newton 1960







SUBSURFACE STRATIGRAPHIC SECTION (B-B') FROM 3.2 MILES SOUTH OF MULBERRY, AUTAUGA COUNTY, TO HUNTER STATION, MONTGOMERY COUNTY



